ABSTRACTS BOOK
ASM 2019
Sustainability, Transformation and Innovation in Medical Education
3rd - 5th July 2019
SEC Exhibition Way, Glasgow G3 8YW
#asmeasm2019

With Thanks to:
ALTUS | CASPer
# Abstracts for ASM 2019

## Awards, Grants and Prizes

<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
<th>Presentation Details</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EDC Innovative, Interesting and Prize-winning Work</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Educator Development Award 2018</td>
<td>G Hadley</td>
<td>Thursday 4&lt;sup&gt;th&lt;/sup&gt; July 11-11.30am Carron 2</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td>D DeLuca</td>
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<tr>
<td>Eradicating Neurophobia</td>
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<tr>
<td>Educator Development Award 2018</td>
<td>G Curnow</td>
<td>Thursday 4&lt;sup&gt;th&lt;/sup&gt; July 11-11.30am Carron 2</td>
<td>35</td>
</tr>
<tr>
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<tr>
<td>Up the Creek – Teaching in Challenging Environments</td>
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</tr>
<tr>
<td>Education Innovation Award 2018</td>
<td>F Osborne</td>
<td>Thursday 4&lt;sup&gt;th&lt;/sup&gt; July 10.45-11.00am Carron 2</td>
<td>36</td>
</tr>
<tr>
<td></td>
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<tr>
<td>Back to reality: Exploring the use of medical reality television as an adjunct to case-based learning with undergraduate medical students</td>
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<tr>
<td>How the Gender Imbalance Impacts Female Cardiologists</td>
<td>J Peal</td>
<td>Thursday 4&lt;sup&gt;th&lt;/sup&gt; July 11.30am-12.10pm Carron 2</td>
<td>37</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time for Dementia - A new way of seeing</td>
<td>S Daley</td>
<td>Thursday 4&lt;sup&gt;th&lt;/sup&gt; July 11.30am-12.10pm Carron 2</td>
<td>39</td>
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<td>Y Feeney</td>
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<td>S Banerjee</td>
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</tr>
<tr>
<td><strong>Research Paper Award 2019 Finalists</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>PERFORM: Performance Enhancing Routines for Optimising Readiness Using Metacognition for the Management of Acutely Unwell Patients</td>
<td>H Church</td>
<td>Thursday 4&lt;sup&gt;th&lt;/sup&gt; July 4.35-6.05pm Carron 1</td>
<td>40</td>
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</tr>
<tr>
<td>How can tomorrow’s doctors be more caring? A phenomenological investigation</td>
<td>H Gillespie</td>
<td>Thursday 4&lt;sup&gt;th&lt;/sup&gt; July 4.35-6.05pm Carron 1</td>
<td>41</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supervised workplace learning in postgraduate medical training</td>
<td>A Wiese</td>
<td>Thursday 4&lt;sup&gt;th&lt;/sup&gt; July 4.35-6.05pm Carron 1</td>
<td>42</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Small Grants Award Recipients</strong></td>
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<td></td>
</tr>
<tr>
<td>2017: &quot;Pretending I’m competent&quot;: a longitudinal exploration of medical students acting and performing as if professional</td>
<td>E Stubbing</td>
<td>Wednesday 3&lt;sup&gt;rd&lt;/sup&gt; July 3.30-3.50pm Alsh 1</td>
<td>43</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2018: Is there a problem in PBL? The International Student Perspective</td>
<td>G Curnow</td>
<td>Wednesday 3&lt;sup&gt;rd&lt;/sup&gt; July 3.50-4.10pm Alsh 1</td>
<td>44</td>
</tr>
</tbody>
</table>
2018: Transitions as transformations in learning orientations and the role of the undergraduate medical curriculum  
V Farnsworth  
Wednesday 3rd July 4.30-4.50pm  
Alsh1

2018: Simulated Patients' Experiences and Perspectives of an Interprofessional Ward Simulation  
V O’Carroll  
M McKinley  
I Burns  
H Geddes  
A Brown  
Wednesday 3rd July 4.50-5.10pm  
Alsh 1

**Sir John Ellis Student Prize Winner 2019**

Peer Marking for Written Assessment  
T Fraser  
Wednesday 3rd July 2-2.30pm  
Lomond Auditorium

**Teaching, Innovation and Excellence Prize 2019 Finalists**

Liverpool Student Doctor Simulation Event (LivDocSim)  
E Mullen  
J Young  
R Benson  
Thursday 4th July 4.35-6.05pm  
Dochart 1

“Studybuddy”; an educational board game to facilitate undergraduate students’ learning and revision of dermatology  
C Pardoe  
The Studybuddy Team  
Thursday 4th July 4.35-6.05pm  
Dochart 1

Developing an out-of-hours teaching programme for medical students and an interdisciplinary teaching dementia crash course  
L Horne  
Thursday 4th July 4.35-6.05pm  
Dochart 1

“PsychEDUp”: a seven-week multidisciplinary volunteer-led evening course for third year MBBS students  
S Butler  
R Keynejad  
Thursday 4th July 4.35-6.05pm  
Dochart 1

A cost-effective and high-quality technological solution to teaching ophthalmology to medical students in the clinical setting  
H Monla-Haidar  
Thursday 4th July 4.35-6.05pm  
Dochart 1

**Medical Education Travelling Fellowships**

M Lazarus  
Thursday 4th July 3-3.20pm  
Alsh 1

2018: Professional Identity Formation in Medical Students in the UK and Taiwan  
J Read  
Thursday 4th July 2.20-2.40pm  
Alsh

**The Clinical Teacher Travelling Fellowship**

2017: Boston Children's Hospital and Harvard Medical School Simulation Team  
A Hall  
Thursday 4th July 2.40-3.00pm  
Alsh 1
New Leaders Award Winner 2019

@BecomingaDr and the National Health Careers Conference
R Sethi
Wednesday 3rd July
5.30-5.50pm
Alsh 1

ASME/GMC Excellent Medical Education Award 2018 UG Category

Use of empathy maps combined with real patient encounters in, medical education: student and patient experiences
P Cairns, I Pinker, E Watson, A Ward, R Hsu, A Laidlaw
Wednesday 3rd July
4.10-4.30pm
Alsh 1

ASME/BSR Joint Educational Research Prize 2019

Training the next generation of clinical rheumatology researchers: evaluation of a graduate Allied Health Professional and Nurse Internship programme
A Patience, D Wright, C Bowen, M Fry, J Adams
Thursday 4th July
2-2.20pm
Alsh 1

Inaugural ASME PhD Award 2017

System research into child-centred medical education
F Speyer (T Dornan, M Shields, G Roberts)
Poster Board F1

Page | 3
### Abstracts presented in oral Parallel Sessions, listed by theme

<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
<th>Presentation Details</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Clinical Skills</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direct Ophthalmoscopy Learning Unveiled</td>
<td>R Chen, A Ross, W Amoaku, D Said, H Dua, P Agrawal</td>
<td>Thursday 4th July 2.00-2.20pm at Alsh 2</td>
<td>62</td>
</tr>
<tr>
<td>Maybe I won’t be a terrible doctor after all? Does fTIE the assistantship prepare medical students for clinical decision-making?</td>
<td>G Greenlees, I Sabroe</td>
<td>Thursday 4th July 2.20-2.40pm at Alsh 2</td>
<td>63</td>
</tr>
<tr>
<td>The Use Of A Surgical Simulator To Develop Knee Arthroscopy Skills</td>
<td>C Kocialkowski, N Atwal</td>
<td>Thursday 4th July 2.40-3.00pm at Alsh 2</td>
<td>64</td>
</tr>
<tr>
<td>Transforming intimate examination of males using Clinical Teaching Associates</td>
<td>A Demetri, F Charlton, J Taylor, K Jones</td>
<td>Thursday 4th July 3.00-3.20pm at Alsh 2</td>
<td>65</td>
</tr>
<tr>
<td><strong>Communication Skills</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doctors as Storytellers - Promoting medical student confidence, body language and storytelling skills through performance training for oral case presentation</td>
<td>H Fuller, K Stevenson</td>
<td>Wednesday 3rd July 3.30-3.50pm at Boisdale 1</td>
<td>66</td>
</tr>
<tr>
<td>Makaton in Medicine- Equipping Medical Students with an Additional Means of Communication</td>
<td>V Westcott, P Nalwaya, A Wallace, W Brown, P Rusby, J Dovey, J Rees</td>
<td>Wednesday 3rd July 3.50-4.10pm at Boisdale 1</td>
<td>67</td>
</tr>
<tr>
<td>Teaching difficult communication skills through patient engagement: a novel approach</td>
<td>H Patel, I Hibell, M Beattie, B Chiva Giurca, N Mukundu Nagesh, M Saint, G Lau</td>
<td>Wednesday 3rd July 4.10-4.30pm at Boisdale 1</td>
<td>68</td>
</tr>
<tr>
<td>The PHONE Checklist - A Tool for Training and Improving Telephone Communication Between Doctors</td>
<td>F Guest, L Merker, R Patel, I White, I Hunter</td>
<td>Wednesday 3rd July 4.30-4.50pm at Boisdale 1</td>
<td>69</td>
</tr>
<tr>
<td><strong>CPD</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Considerations from over a decade of studies into mentor preparation and activity: the unexpected consequence of changed medical mind-sets.</td>
<td>A Steven, N Redfern</td>
<td>Wednesday 3rd July 4.50-5.10pm at Boisdale 1</td>
<td>70</td>
</tr>
<tr>
<td>Transforming reflection for CPD and appraisal.</td>
<td>L Miller</td>
<td>Wednesday 3rd July 5.10-5.30pm at Boisdale 1</td>
<td>71</td>
</tr>
<tr>
<td>What Continuing Professional Development do qualified Physician Associates want?</td>
<td>R Shorrock, P Fletcher</td>
<td>Wednesday 3rd July 5.30-5.50pm at Boisdale 1</td>
<td>72</td>
</tr>
<tr>
<td><strong>Curriculum Planning</strong></td>
<td></td>
<td></td>
<td></td>
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<td>------------------------</td>
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</tr>
<tr>
<td>Fulfilling a new obligation: Sustainable Healthcare in the UK medical school curriculum</td>
<td>MS Tun</td>
<td>Thursday 4th July 2.00-2.20pm</td>
<td>Fyne</td>
</tr>
<tr>
<td>Impact of the learning environment on students' learning strategies: a comparative ethnographic study</td>
<td>M Veysey, E Leopardi, R Duvivier, C Brosnan</td>
<td>Thursday 4th July 2.20-2.40pm</td>
<td>Fyne</td>
</tr>
<tr>
<td>Improving clinic attendances for core medical trainees at a busy DGH</td>
<td>P Mithani, M Abu Baker, L Bafadhel</td>
<td>Thursday 4th July 2.40-3.00pm</td>
<td>Fyne</td>
</tr>
<tr>
<td>Navigating medical school: Exploring the experiences of Gateway programme medical students</td>
<td>R D'Silva, S Curtis, M Barker, J Rowland, J Cleland</td>
<td>Thursday 4th July 3.00-3.20pm</td>
<td>Fyne</td>
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</tbody>
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<thead>
<tr>
<th><strong>Faculty Development</strong></th>
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<tbody>
<tr>
<td>Being a clinical teacher: experiences, identity and progression</td>
</tr>
<tr>
<td>Development of a clinical teacher identity: the influence of the Community of Practice</td>
</tr>
<tr>
<td>Developing and Maintaining Teaching and Supervision Skills: A Survey of Hospital Consultants’ Learning Needs</td>
</tr>
<tr>
<td>Know thyself: does medical school examiner marking correlate with self-perceived hawkishness?</td>
</tr>
<tr>
<td>Teaching Fellows tackle Tertiary Centre Paediatrics - a model for undergraduate paediatric education</td>
</tr>
<tr>
<td>The icing on the cake: why should healthcare professionals volunteer to be part of a simulation faculty?</td>
</tr>
<tr>
<td>Two birds, one stone: Creating a Foundation Simulation Role</td>
</tr>
<tr>
<td>What becomes of the Teaching Fellows and why? Exploring how teaching fellow posts impact on doctors’ career development through a synthesis of visual and narrative accounts - a pilot study</td>
</tr>
</tbody>
</table>
### International Medical Education

**Identifying the learning needs of Primary Care Physicians in remote rural communities using an ethnographic approach**

A Hassell  
L Dikomitis  
E Dayrit  
G Apostol  
I Agus  
S Caranay-Narag  
J De Guzman  
T Shepherd  
M Dayrit  

Wednesday 3rd July  
3.50-4.10pm  
Boisdale 2

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**Proof of concept study of synchronised Problem Based Learning between students from a UK and Brazilian medical school**

AR Morris  
T Shepherd  
D Zornoff  
P Hokoma  
N Hokoma  
K Chama  
S Weber  
A Hassell  

Wednesday 3rd July  
4.10-4.30pm  
Boisdale 2

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### Inter-Professional Education

**Does interprofessional learning change interprofessional practice?**

L Chase  
P Fletcher  

Thursday 4th July  
2.00-2.20pm  
Boisdale 2

---

**Integration of mixed data types: how does it all hang together?**

H Foster-Collins  

Thursday 4th July  
2.20-2.40pm  
Boisdale 2

---

**Multidisciplinary simulation to influence widespread culture change in falls prevention**

L Baxter  
S Thirugnanosothy  
C Peel  
D Metz  

Thursday 4th July  
2.40-3.00pm  
Boisdale 2

---

**Oncology interprofessional education: rolling with roles**

R Hayhurst  
S Ralph  
S Fullwood  
A Rehman  

Thursday 4th July  
3.00-3.20pm  
Boisdale 2

---

**Speaking Up: A Team Based Approach to Patient Safety**

J Meek  
L Dodd  
K Fenwick  
J Fisher  

Friday 5th July  
9.00-9.20am  
Boisdale 2

---

**Undergraduate healthcare students need encouragement to use available ethics literature to help inform complex ethical deliberations.**

L Corfield  
M Stibbs  
C Watkins  
M Allinson  

Friday 5th July  
9.20-9.40am  
Boisdale 2

---

**Undergraduate interprofessional simulations: Taking a closer look**

E Anderson  
S Bennett  

Friday 5th July  
9.40-10.00am  
Boisdale 2

---

**What is the hidden interprofessional curriculum through the eyes of medical students?**

K Leedham-Green  
A Knight  
R Iedema  

Friday 5th July  
10.00-10.20am  
Boisdale 2

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### Patient Voice

**Debrief Encounters of the Third Kind: The role of third sector organisations in simulation debriefing**

A Demetri  
F Charlton  
K Jones  

Wednesday 3rd July  
4.50-5.10pm  
Boisdale 2
<table>
<thead>
<tr>
<th>Title</th>
<th>Speaker(s)</th>
<th>Date/Time</th>
<th>Venue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Involving Patients in Post-Qualified Education of Trainee GPs</td>
<td>S Maqbool, R Green</td>
<td>Wednesday 3rd July 4.30-5.00pm</td>
<td>Boisdale 2</td>
</tr>
<tr>
<td>Providing a Patient Perspective: Patient Involvement in Miscarriage</td>
<td>F Charlton, A Demetri, K Jones</td>
<td>Wednesday 3rd July 5.10-5.30pm</td>
<td>Boisdale 2</td>
</tr>
<tr>
<td>Postgraduate Education</td>
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<tr>
<td>An evaluation of take-home laparoscopic simulation programmes in the</td>
<td>V Blackhall, J Cleland, P Wilson, S Moug, K Walker</td>
<td>Wednesday 3rd July 3.30-3.50pm</td>
<td>Alsh 2</td>
</tr>
<tr>
<td>Contextual factors that affect the development of clinical thinking</td>
<td>R Locke, A Mason, C Coles, R Lusznat, M Masding</td>
<td>Wednesday 3rd July 3.50-4.10pm</td>
<td>Alsh 2</td>
</tr>
<tr>
<td>Doctors as apprentices - a novel clinical leadership and management</td>
<td>B Kawai-Calderhead, R Christie</td>
<td>Wednesday 3rd July 4.10-4.30pm</td>
<td>Alsh 2</td>
</tr>
<tr>
<td>Gender in Surgery: Exploring the identity formation of female</td>
<td>G Offiah, S Cable, C Rees, S Schofield</td>
<td>Wednesday 3rd July 4.50-5.10pm</td>
<td>Alsh 2</td>
</tr>
<tr>
<td>Getting Under the Skin of GP Trainee Supervision</td>
<td>D Jackson, I Davison, J Brady</td>
<td>Wednesday 3rd July 5.10-5.30pm</td>
<td>Alsh 2</td>
</tr>
<tr>
<td>It's not what you know, it's who you know: a social capital and</td>
<td>C O'Callaghan, J Sands, C Sherratt, J Brown</td>
<td>Friday 5th July 9.00-9.20am</td>
<td>Alsh 2</td>
</tr>
<tr>
<td>Mental Health Life Support (MHLs): An innovative training</td>
<td>L Thoms, S Samad, A Boyle</td>
<td>Friday 5th July 9.40-10.00am</td>
<td>Alsh 2</td>
</tr>
<tr>
<td>Teaching the Management of Trauma Patients: The Development of</td>
<td>L Hainsworth, S Kiddle, A Kosti, A Lloyd, I Hunter</td>
<td>Friday 5th July 10.00-10.20am</td>
<td>Alsh 2</td>
</tr>
</tbody>
</table>
There Ain't No Party Like a Lap Box Party - an independent observation into social gatherings as a means to improve engagement with the laparoscopic surgical trainer.

Practice Based Teaching And Learning

Improving Medical Student Preparedness for Practice in line with the General Medical Council’s Outcomes for Graduates: A Pilot Study

L Baxter
A Moxley
P White

Friday 5th July
10.20-10.40am
Dochart 2

Mindfulness Based Cognitive Skill Training for Health Professionals in Training (MBCT-HIT)

F Ruths
F Turner
V Fernando
M Maroney

Friday 5th July
9.20-9.40am
Dochart 2

Rock, Paper, Scissors, OK? An infographic improving Clinical Practice

S Edwards

Friday 5th July
9.40-10.00am
Dochart 2

Viewing near peer teaching in general practice through a sociomaterial lens

L Pope
S Jamieson
J Morrison

Friday 5th July
10.00-10.20am
Dochart 2

Professionalism

Becoming a GP Trainer - the Barriers and Enablers

K McConville

Wednesday 3rd July
3.30-3.50pm
Dochart 2

Capturing undergraduate medical student lecture attendance: are students more willing to lie online?

P Tayler-Hunt
R Hearn

Wednesday 3rd July
3.50-4.10pm
Dochart 2

Challenging values and questioning norms: Discourse in LGBTQ+ medical curriculum

H Bintley

Wednesday 3rd July
4.10-4.30pm
Dochart 2

Defining Professionalism for Mental Health Services: A Qualitative Study

L Aylott
G Finn
P Tiffin
S Brown

Wednesday 3rd July
4.30-4.50pm
Dochart 2

Exploring Empathy: Implications for Teaching and Assessment

M Fyfe
C Douglass

Wednesday 3rd July
4.50-5.10pm
Dochart 2

Forging a new identity: experiences of, and attitudes towards, Physician Associates.

M Brown
W Laughey
M Veysey
G Finn

Wednesday 3rd July
5.10-5.30pm
Dochart 2

Peeling back the layers: Making professionalism teaching meaningful

I Rodd
S Lynch

Wednesday 3rd July
5.30-5.50pm
Dochart 2

Professional Identity Formation and The Black Medical Student

O Adesalu
R Bregazzi

Thursday 4th July
2.00-2.20pm
Dochart 2

Professionalism in the pre-registration pharmacist placement: an exploratory stakeholder study

H Ireland
R O’Rourke
J Sowter

Thursday 4th July
2.20-2.40pm
Dochart 2
<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
<th>Date</th>
<th>Time</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raising Concerns - the potential impact on medical student</td>
<td>E Sullivan, H Thampy, S Gay</td>
<td>Thursday 4th July</td>
<td>2.40-3.00pm</td>
<td>Dochart 2</td>
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<tr>
<td>professionalism</td>
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<tr>
<td>Student-Specific Schwartz Rounds: An Innovative Approach to</td>
<td>D Gleeson, I White, M Awan, J Arwyn-Jones</td>
<td>Thursday 4th July</td>
<td>3.00-3.20pm</td>
<td>Dochart 2</td>
</tr>
<tr>
<td>Reflective Practice</td>
<td></td>
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<tr>
<td><strong>Selection</strong></td>
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</tr>
<tr>
<td>An assessment of the impact of pre-test preparation on performance in</td>
<td>S Kulkani, J Parry, A Sitch</td>
<td>Wednesday 3rd July</td>
<td>3.30-3.50pm</td>
<td>Etive</td>
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<tr>
<td>the UK Clinical Aptitude Test (UKCAT): a national study.</td>
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<tr>
<td>Careers in medicine - the Dare 2 Doctor programme</td>
<td>R Webster, K Jones</td>
<td>Wednesday 3rd July</td>
<td>4.10-4.30pm</td>
<td>Etive</td>
</tr>
<tr>
<td>Developing a sustainable national approach to measure and</td>
<td>S Curtis, P Tang, P Lambe, C Owen, D Smith, P Garrud</td>
<td>Wednesday 3rd July</td>
<td>5.30-5.50pm</td>
<td>Etive</td>
</tr>
<tr>
<td>support widening participation in medical schools</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>In at deep end: can sixth form work experience students take on the</td>
<td>R Hearn, P Taylor-Hunt, K Arblaster</td>
<td>Thursday 4th July</td>
<td>2.00-2.20pm</td>
<td>Etive</td>
</tr>
<tr>
<td>challenge of a third year medical school simulation session?</td>
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<td></td>
</tr>
<tr>
<td>Medical Application Preparation Study (MAPS): Exploring culture and</td>
<td>D Jackson, A Spruce, N Whalley, G Seyan, C Agwu</td>
<td>Thursday 4th July</td>
<td>2.20-2.40pm</td>
<td>Etive</td>
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<tr>
<td>perceptions through applicant stories</td>
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<td>Medicine Applicant Preparation Study (MAPS): Preparation Activities</td>
<td>D Jackson, A Spruce, D Ward</td>
<td>Thursday 4th July</td>
<td>2.40-3.00pm</td>
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<td>and Challenges for Medicine Applicants</td>
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<td>K Dore, K Dore, C Zou, F Juster</td>
<td>Thursday 4th July</td>
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<td>B Jamil, I Yousafzai</td>
<td>Wednesday 3rd July</td>
<td>4.30-4.50pm</td>
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<td>Wednesday 3rd July</td>
<td>4.50-5.10pm</td>
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<td>choice: A national qualitative interview study in the United Kingdom</td>
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<td>Widening participation to medical school and objectively</td>
<td>M Parker, J Roberts</td>
<td>Wednesday 3rd July</td>
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<td>improving knowledge of the application process: Impact of a one-day</td>
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<td><strong>Teaching About Specific Subjects</strong></td>
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<td>Sustainable Healthcare in Medical Education - an underrepresented</td>
<td>A Boulton, B MacDonald</td>
<td>Friday 5th July</td>
<td>9.00-9.20am</td>
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</table>
Teaching, Learning & Assessment On Clinical Rotations

Confidence is key: coupling new-skill coaching with familiar territory
H McNeill
A Khobjhou
D Murray
T Lea
Wednesday 3rd July 3.30-3.50pm
Fyne

“How did I do?” Introducing a structured approach to deliver feedback on medical student clerkings and encourage “complete clerkings”
N Devani
O Mitchell
V Gkiousias
J Walton
T Bogdanova
E Karra
P Dilworth
N Murch
Wednesday 3rd July 3.50-4.10pm
Fyne

Making the most of the resources: An innovative way to conduct a student hospital induction using a virtual tour and patient interviews
J Williams
C Carus
A Bracken
M Carroll
S Salih
Z Yaqoob
Wednesday 3rd July 4.10-4.30pm
Fyne

Professional identity formation during transition into clinical years: Interaction between the individual and the social
N Mayat
W Lowe
Wednesday 3rd July 4.30-4.50pm
Fyne

The feasibility of using synchronized video-review as a tool to enhance the educational utility of surgical training opportunities
S Isreb
J McLachlan
J Illing
S Attwood
H Hesselgreaves
Wednesday 3rd July 4.50-5.10pm
Fyne

The self-reported concerns and objectives of early clinical medical students - a qualitative study.
K Waite
B Hui
R Pooni
S Madathil
Wednesday 3rd July 5.10-5.30pm
Fyne

What factors contribute to becoming a doctor-in-difficulty? The perspectives of Foundation doctors.
C Jones
Wednesday 3rd July 5.30-5.50pm
Fyne

Undergraduate Medical Education – Assessment

A phenomenographic exploration of widening participation students’ conceptions and experiences of success at medical school.
R D’Silva
S Curtis
M Barker
J Rowland
J Cleland
Wednesday 3rd July 4.10-4.30pm
Carron 1

Do Gateway courses support underrepresented students achieve their potential? A comparison with students on standard medical degree courses.
S Curtis
D Smith
Wednesday 3rd July 3.50-4.10pm
Carron 1

Enhancing the Test Security of a High-Stakes Mass Online Test
P Antonacci
C Zou
Wednesday 3rd July 4.30-4.50pm
Carron 1

Evaluation of the Objective Structured Knowledge Assessment (OSKA) - a novel formative assessment tool.
AT Misky
AH Sam
K Meeran
Wednesday 3rd July 4.50-5.10pm
Carron 1

Feedback in Medical Education: Student satisfaction vs improvement in clinical skills, A randomised controlled trial.
H Stevenson
I Davison
Wednesday 3rd July 5.10-5.30pm
Carron 1
<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
<th>Date</th>
<th>Time</th>
<th>Room</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information seeking behavior of medical undergraduates, Sri Lanka</td>
<td>MPLR Marasinghe, MN Chandrahilake, KTAA Kasturiratne</td>
<td>Wednesday 3rd July</td>
<td>5.30-5.50pm</td>
<td>Carron 1</td>
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<tr>
<td>Using student feedback to enhance internal OSCE consistency</td>
<td>Z Noonan, L Pope</td>
<td>Thursday 4th July</td>
<td>2.00-2.20pm</td>
<td>Carron 1</td>
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<td>Utility of Practicum Script, a clinical reasoning simulator in</td>
<td>AH Sam, CF Collares, A Freeman, E Hornos, C Van der Vleuten, EM Pleguezuelos</td>
<td>Thursday 4th July</td>
<td>2.20-2.40pm</td>
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<td>Undergraduate Medical Education - Teaching &amp; Learning</td>
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<td>A construct for nearness in near-peer learning: The experience of</td>
<td>RW Spiring</td>
<td>Thursday 4th July</td>
<td>2.40-3.00pm</td>
<td>Carron 1</td>
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<td>undergraduate medical students situated in GP practices with doctors</td>
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<tr>
<td>K Leedham-Green, F Zahra, K Dunton</td>
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<td>Thursday 4th July</td>
<td>3.00-3.20pm</td>
<td>Carron 1</td>
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<tr>
<td>An exploration of the implications of employment for medical</td>
<td>M Anane, SA Curtis</td>
<td>Friday 5th July</td>
<td>9.00-9.20am</td>
<td>Carron 1</td>
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<td>students. A comparison of widening participation students to</td>
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<td>traditional entry students.</td>
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<tr>
<td>An Innovative Teaching Approach for the Clinical Assessments of</td>
<td>C Oliver, A Gosal, P Davies, A Samuels</td>
<td>Friday 5th July</td>
<td>9.20-9.40am</td>
<td>Carron 1</td>
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<td>Wounds.</td>
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<td>Are puzzles a valid tool in medical education?</td>
<td>A Tebbett</td>
<td>Friday 5th July</td>
<td>9.40-10.00am</td>
<td>Carron 1</td>
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<tr>
<td>Arts and Humanities in Undergraduate Medical Education, a Survey of</td>
<td>L Revell, A Blythe</td>
<td>Friday 5th July</td>
<td>10.00-10.20am</td>
<td>Carron 1</td>
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<td>UK Medical Schools</td>
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<td>Balancing the balance sheet – An innovative technique to teach</td>
<td>P Eachempati, S Kumbargere, K Kumar, AR Hj Ismail</td>
<td>Thursday 4th July</td>
<td>2.40-3.00pm</td>
<td>Carron 2</td>
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<td>entrepreneurial skills to dental students</td>
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<td>Can we improve the quality and quantity of feedback obtained by</td>
<td>L Gray, J Oldbury, E Bruce, P Watson</td>
<td>Friday 5th July</td>
<td>10.20-10.40am</td>
<td>Carron 1</td>
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<td>University of Manchester 4th year medical students in a</td>
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<td>Do A-levels prepare students to succeed in assessments at Medical</td>
<td>C Jones</td>
<td>Friday 5th July</td>
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<td>Exploring the undergraduate dental students’ views of</td>
<td>A Dargue, E Fowler</td>
<td>Wednesday 3rd July</td>
<td>3.30-3.50pm</td>
<td>Carron 2</td>
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<td>How do medical students decide on their elective? - A mixed methods</td>
<td>C Mashford</td>
<td>Wednesday 3rd July</td>
<td>3.50-4.10pm</td>
<td>Carron 2</td>
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<td>How to optimize Medical school 'teacher training': A focus group study of UK Junior doctors.</td>
<td>S Winfield, J Garner</td>
<td>Wednesday 3rd July</td>
<td>4.10-4.30pm</td>
<td>Carron 2</td>
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<td>If you didn't write it, it didn't happen - can documentation skills be taught in simulation?</td>
<td>A Pereira, G Dixon, J Ross, G Zubikarai, AE Stanton</td>
<td>Wednesday 3rd July</td>
<td>5.30-5.50pm</td>
<td>Carron 2</td>
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<td>Implementing a Unique Immersive Near-Peer Led Clinical Skills Bootcamp for Early-Year Medical Students</td>
<td>U Khan</td>
<td>Wednesday 3rd July</td>
<td>4.30-4.50pm</td>
<td>Carron 2</td>
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<td>Is a 'Students as Partners' approach effective in the Medical Undergraduate Setting?</td>
<td>M Kronfli, G Murtagh</td>
<td>Wednesday 3rd July</td>
<td>4.50-5.10pm</td>
<td>Carron 2</td>
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<tr>
<td>Learning about Translation and Cultural Competencies in simulated GP consultations for undergraduate medical students</td>
<td>A Sufraz, P Taylor-Hunt, R Hearn</td>
<td>Wednesday 3rd July</td>
<td>5.10-5.30pm</td>
<td>Carron 2</td>
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<tr>
<td>Learning how to prepare students for integrated care: Lessons from Leicester Medical School (LMS)</td>
<td>E Hayward, L Anderson</td>
<td>Thursday 4th July</td>
<td>2.00-2.20pm</td>
<td>Carron 2</td>
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<td>Medical Students' awareness of and choices of sources of help for mental health problems at one UK medical school</td>
<td>T Quince, H Caisley, P Thiemann, P Wilkinson, S Jackman</td>
<td>Thursday 4th July</td>
<td>2.20-2.40pm</td>
<td>Carron 2</td>
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<td>Medical Students perceptions of General Practice</td>
<td>K Banner, H Alberti, J Cleland, J Stewart</td>
<td>Thursday 4th July</td>
<td>3.00-3.20pm</td>
<td>Carron 2</td>
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<td>Meeting of Minds: Exploring Medical Literature and Critical Analysis through a Student-Led Undergraduate Journal Club</td>
<td>B TK Hui, RS Pooni, K Waite</td>
<td>Friday 5th July</td>
<td>9.00-9.20am</td>
<td>Carron 2</td>
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<td>Out of hours, out of sight? Uncovering the education potential of general practice urgent care for UK undergraduates</td>
<td>E Grove, V Boon, T Thompson</td>
<td>Friday 5th July</td>
<td>9.20-9.40am</td>
<td>Carron 2</td>
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<td>Patient Shadowing and it's role in empathy development</td>
<td>W Calvert</td>
<td>Friday 5th July</td>
<td>9.40-10.00am</td>
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<td>Putting the World in World Cafe: Adapting the world cafe model to allow thorough de-brief following a medical elective.</td>
<td>D Maxfield, J Fisher, R Walker</td>
<td>Friday 5th July</td>
<td>10.00-10.20am</td>
<td>Carron 2</td>
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<tr>
<td>Required to withdraw: experiences of struggling first year medical students</td>
<td>A Picton, S Greenfield, J Parry</td>
<td>Friday 5th July</td>
<td>10.20-10.40am</td>
<td>Carron 2</td>
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<td>Role models for female undergraduate medical students: what attributes do female students look for and what is the influence of gender?</td>
<td>N Dutta, M Page</td>
<td>Friday 5th July</td>
<td>10.20-10.40am</td>
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<td>Simulation bingo: An effective method of engaging observers in-situ?</td>
<td>R Pooni, K Waite, B Hui, K Johns</td>
<td>Thursday 4th July 2.00-2.20pm</td>
<td>185</td>
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<td>Dochart 1</td>
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<td>Stimulation with Simulation: Creation of a &quot;Virtual Ward&quot; to Improve Medical Student Learning</td>
<td>P White, A Moxley, L Baxter</td>
<td>Thursday 4th July 2.20-2.40pm</td>
<td>186</td>
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<td>Dochart 1</td>
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<td>Student perspectives on barriers to performance for Black &amp; Minority Ethnic graduate-entry medical students</td>
<td>N Morrison, C Blackburn, M Machado</td>
<td>Thursday 4th July 2.40-3.00pm</td>
<td>187</td>
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<td>Dochart 1</td>
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<td>Supporting transition to the clinical learning environment for medical students from underrepresented backgrounds</td>
<td>S Curtis, R D'Silva, C Gilbert</td>
<td>Thursday 4th July 3.00-3.20pm</td>
<td>188</td>
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<td>Dochart 1</td>
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<tr>
<td>Sustainability Matters: how can we engage our medical students in thinking about sustainability issues?</td>
<td>A Skidmore, S Aynsley, S Briggs</td>
<td>Wednesday 3rd July 3.30-3.50pm</td>
<td>189</td>
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<td>The demise of death-by-PowerPoint: Interactive peer teaching and gamification for medical students</td>
<td>L Ting, A Demetri, R Webster, A Kerry, S Perry</td>
<td>Wednesday 3rd July 3.50-4.10pm</td>
<td>190</td>
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<td>Dochart 1</td>
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<td>The Rise and Rise of Apps in Medical Education</td>
<td>I Stefanova, Y Negreskul, J Ryan, M Vega-Poblete, J Younis, F Gishen</td>
<td>Wednesday 3rd July 4.10-4.30pm</td>
<td>191</td>
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<td>Dochart 1</td>
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<td>The role of Balint groups in undergraduate medical education</td>
<td>N Gajree, Z Hutcheson, J Devlin, E Lewington, C Paton</td>
<td>Wednesday 3rd July 4.30-4.50pm</td>
<td>192</td>
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<td>Dochart 1</td>
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<td>The Wellness Scale: Evaluating the impact of an innovative tool to support medical student wellbeing on clinical placement.</td>
<td>A Gosal, C Oliver, M Young, L Bowen, C Priest, Z Brown, S Jenkin, K Benstead, P Davies, A Samuels</td>
<td>Wednesday 3rd July 4.50-5.10pm</td>
<td>193</td>
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<td>Dochart 1</td>
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<td>Transformative Learning and Identity in Medical Education: A Drag Perspective</td>
<td>G Sharpstone, H Bintley</td>
<td>Wednesday 3rd July 5.10-5.30pm</td>
<td>194</td>
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<td></td>
<td>Dochart 1</td>
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<tr>
<td>Truro Trauma Scribes: Using Students as Scribes to Increase Experience of Major Trauma</td>
<td>S Bryce, K Cheema, B Warrick</td>
<td>Wednesday 3rd July 5.30-5.50pm</td>
<td>196</td>
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<td>Dochart 1</td>
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</tr>
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</table>
### Using simulation to improve confidence in approach to on-calls in final year medical students

A Carroll  
A Kiddle  
E Booth  
I Chung

**Friday 5th July**  
**9.00-9.20am**  
**Dochart 1**

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### Virtual A&E experience using 360 video

J Ross  
J Bath  
C Jacobs

**Friday 5th July**  
**9.20-9.40am**  
**Dochart 1**

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### Virtual Reality Fully Immersive Interactive Videos in Undergraduate Surgical Medical Education

A Kiddle  
L Hainsworth  
A Kosti  
A Lloyd  
R Bamford  
I Hunter

**Friday 5th July**  
**9.40-10.00am**  
**Dochart 1**

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### TEL Abstracts presented in oral Parallel Sessions

<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
<th>Presentation Details</th>
<th>Page</th>
</tr>
</thead>
</table>
| A national survey of undergraduate teaching in General Practice in the United Kingdom | E Cottrell  
H Alberti  
T Thompson  
L Pope  
J Rosenthal | **Friday 5th July**  
**9.00-9.20am**  
**Alsh 1** | 201 |
| ClinicalCasesPod: Do medical students tune in to a case-based podcast series to help them learn clinical reasoning? | T Vincent  
R Phillips  
E Davies  
K Marchon  
T Vincent  
M Okorie  
S Akrimi  
J Montgomery | **Friday 5th July**  
**9.20-9.40am**  
**Alsh 1** | 202 |
| Evaluating the use of 360-videos in Medical Education by comparing it with 2D-videos: A Situational Awareness Case Study. | A Jain  
V Dimitrova | **Friday 5th July**  
**9.40-10.00am**  
**Alsh 1** | 204 |
| Using high-fidelity simulation as a tool to teach medical ethics and law | D Pillai  
T Baker  
A O’Keeffe  
N Sathyanarayana | **Friday 5th July**  
**10.00-10.20am**  
**Alsh 1** | 205 |
| Stealth Marking for Improved Quality Assurance in The Ethics and Law Assessment | D Thewlis  
J Coleman | **Friday 5th July**  
**10.20-10.40am**  
**Alsh 1** | 206 |
# Abstracts presented as Posters

## Basic Science/ Biomedical Teaching & Assessment

**Flipping a Biochemistry Class within a Medical Curriculum: Impacts on Perception, Engagement and Attainment**

- H Fakhoury
- H Fatoum
- M AlDeiry
- H Alahmad
- J Enabi
- S Kayali
- Y Bawahab
- K Hamweyah
- E Masuadi
- A Obeidat
- C Lumsden

## Clinical Skills

**Cardiac Arrest Club: Minimising Time to Defibrillation**

- F Charlton
- R Webster
- T Isaac
- L Kelsey
- K Jones

**Exploring the association between how prepared Foundation Year 1 doctors feel for their first foundation post and their perceptions of their exposure to simulation training during medical school**

- O Adesalu
- C Van Hamel

**Final year surprise emergency bleeps**

- A Pereira
- R Webster
- G Dixon
- K Jones
- J L Daurat

**Improving emergency airway training and competency for foundation doctors**

- G Hirst
- R Brookes
- J Garwood
- G Hirst
- R Brookes

**Managing Incidental Findings from Educational Ultrasound: Best Practice Guidelines from a Scottish Medical School**

- O Varsou
- A Hughes
- R Humphreys
- A Laidlaw

**Recognising skills attrition and supporting medical students returning to the Birmingham Medical Degree programme; the ROCS (Revision of Clinical Skills) course**

- D Thewlis
- C Nath
- J Coleman

**Re-teaching the lost art of plaster of Paris application**

- C Kocialewski
- L Hainsworth
- O Pearce

**See one, do one, teach one: Teaching trainees neuraxial anaesthesia. What is the evidence?**

- J Garwood

**Ultrasound for Undergraduates: Should we be teaching hands-on ultrasound skills to medical students?**

- G Dixon
- S Perry
- J Ross
- A Pereira
- T Slade
<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
<th>Session</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Will clinical signs become myth? Exposure to and confidence examining clinical signs amongst final year medical students</td>
<td>S Aziz, D Merriott, A Baigey, G Ransley, B Girling, K Patel, R Flynn, M Folks, E Tyrell, S Aslam, A Koneru, B Prathibha, T Newson</td>
<td>A10</td>
<td>218</td>
</tr>
<tr>
<td>Communication Skills</td>
<td></td>
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</tr>
<tr>
<td>Haway or Howay? A Linguistic Support Programme for International Medical Graduates and Black and Minority Ethnicity trainee doctors in the North East and North Cumbria</td>
<td>A Williamson, M Dickson, G Rutt, T Sanders, A McDonald</td>
<td>B2</td>
<td>219</td>
</tr>
<tr>
<td>How can pharmacists develop patient-pharmacist communication skills? A realist review</td>
<td>A Kerr, C Kelleher, T Pawlikowska J Strawbridge</td>
<td>B3</td>
<td>220</td>
</tr>
<tr>
<td>Understanding patient's perspectives of disease; communication skills teaching through video testimonies of real patient experiences.</td>
<td>C Priest, M Young, D Alder, L Bowen, Z Brown, A Gosal, C Oliver, P Davies, S Jenkin, A Samuels</td>
<td>B5</td>
<td>221</td>
</tr>
<tr>
<td>Using Video Simulation to Improve Ward Round Documentation</td>
<td>R Webster, F Charlton, L Ting, J Ford, H Bothwell, J Taylor, K Jones</td>
<td>B6</td>
<td>222</td>
</tr>
<tr>
<td>CPD</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doctors' attitudes to, beliefs about, experiences of, and suggested improvements for regulation of professional competence</td>
<td>E Galvin, A Wiese, J O'Farrell, J Cotter, D Bennett</td>
<td>B7</td>
<td>223</td>
</tr>
<tr>
<td>Mapping the literature on doctors’ and stakeholders’ experiences, attitudes and beliefs about the regulation of professional competence: a scoping review</td>
<td>A Wiese, E Galvin, I Korotchikova, D Bennett</td>
<td>B8</td>
<td>224</td>
</tr>
<tr>
<td>What are the support needs of healthcare innovators? An analysis of critical success factors and limiting factors.</td>
<td>K Leedham-Green, G Reedy</td>
<td>B9</td>
<td>225</td>
</tr>
</tbody>
</table>
Curriculum Planning

Collecting an evidence base to inform an undergraduate curriculum in Obstetrics & Gynaecology (O&G); the general practitioner’s viewpoint.

Curriculum based simulation programme for Internal medical trainees

Evaluating the role of simulated ‘on-calls’ in transition to FY1 using thematic analysis of structured interviews and formal feedback

Is Medical Education the Solution to the Primary Care Crisis?

Medical students’ speciality preference relative to emotional intelligence and general self-efficacy


Stakeholder perspectives on undergraduate medical education: a systems approach (exploring purpose to better understand interests in curriculum composition)

Student Evaluation: Improving Online Response Rates

Transition from traditional to integrated medical curriculum: faculty’s perspective

Utilising clinical admission data to inform medical school curriculum design: A novel approach to evidence-based curricula.

Worm’s eye view versus bird’s eye view: tackling curriculum transformation from a student’s perspective
**E-Learning**
Faculty perspectives on a new online simulation platform: the Airway to Exposure Series

R Hayhurst
R Hasan
A Sheikh
H Mottershead
A Rehman

**Faculty Development**
An Exploratory Study of Career Inflection Points at Four Institutions

G Beck Dallaghan
N Gollehon
D Balmer
B Richards
N Borges
A. Gill
J Mehta
M Vo

Educator Development: Small Group and Lecture Teaching Skills for Consultants and Speciality Doctors.

R Parikh
N James
N Patel

How effectively are we training our teachers to teach clinical reasoning?

S Khin-Htun
J Hickman
IGlover

Increasing tutor skills in narrative-based teaching methods: outcomes from a teaching intervention

S Dayala
L Wilkinson

The Case for Faculty Development

D Proctor
K Mattick
D Leeder

The design of a regional educational network to support professional development of clinical teaching fellows

A Chu
C Morton
C Pye
L Ghani
SF Smith

The impact of clinical teaching fellowships on the professional development of junior doctors

J Fox
L Wynn-Lawrence
K Leedham-Green
A Chu

The ward is a classroom: Use of Ward Based Educational Guardians to bridge the undergraduate and postgraduate education divide

C van’t Hoff
G Zubikarai
A Notghi
A Stanton
A Kerry

**International Medical Education**
Long-term impact of the Primary Trauma Care course in the Kongo Central province of the Democratic Republic of Congo

T Tolppa
AM Vangu
HC Balu
P Matondo
E Tissingham

'Sink or Swim?' results. Considerations for International Medical Elective projects at the University of Aberdeen.

S Stone
S Tweed
E Lyall
J Moore
A Poobalan
### Inter-Professional Education

<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
<th>Page</th>
<th>Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>An innovative model of interprofessional education to improve staff</td>
<td>S Hasan, J Hewitt, N Anakwue, A Bui, EWood</td>
<td>E5</td>
<td>249</td>
</tr>
<tr>
<td>confidence, competence and communication on a gastroenterology ward in a UK district general hospital</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emergency Department Education - Shifts apart but learning together - A year’s experience of an asynchronous multidisciplinary online learning forum</td>
<td>J Bath, T Godfrey, T Slade</td>
<td>E7</td>
<td>251</td>
</tr>
<tr>
<td>Teaching from the outside: experiences of non-medically qualified clinical teachers of undergraduate medical students</td>
<td>S Bussey</td>
<td>E8</td>
<td>252</td>
</tr>
<tr>
<td>Use of Case Based Simulation to deliver Undergraduate Inter-Professional Education across Community and Hospital Care Settings</td>
<td>S McCaughhey, J Angus, M Al-Talib, S Jones</td>
<td>E10</td>
<td>253</td>
</tr>
<tr>
<td>&quot;Who are they?: survey of medical student attitudes towards physician associates before and after joint teaching sessions</td>
<td>A Beverstock, C Lewis, S Rowlands, K Sales, A Kelly, M Fenton-Jones</td>
<td>E11</td>
<td>254</td>
</tr>
</tbody>
</table>

### Patient Voice

<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
<th>Page</th>
<th>Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients and Doctors as Partners in Learning: Foundation Year 2 Doctors' perceptions of patients as teachers</td>
<td>M Fenton-Jones, A Kyriakou-Haniche, R Aspinall, T Watkin</td>
<td>F2</td>
<td>255</td>
</tr>
<tr>
<td>Working with Voluntary and Community Organisations to enable student research projects</td>
<td>R Farrington, C Kang, L Tomkow</td>
<td>F3</td>
<td>256</td>
</tr>
</tbody>
</table>

### Postgraduate Education

<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
<th>Page</th>
<th>Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessing the extent to which reflective practice promotes learning from paediatric prescribing errors amongst postgraduate medical trainees</td>
<td>M D’Costa, J Brown, G Cleary, G Lamont, M Semple</td>
<td>F4</td>
<td>257</td>
</tr>
<tr>
<td>Assessing the Mental Wellbeing of doctors at Gloucestershire NHS Trust - Introducing the use of a Mental Wellbeing Scale for Junior Doctors during Clinical and Educational Supervisor meetings</td>
<td>M Fahy</td>
<td>F5</td>
<td>258</td>
</tr>
<tr>
<td>Can Surgical Bootcamps Be Used As An Effective Tool in Vascular Surgery</td>
<td>N Slim, M Okocha, T Walker, R Winterborn</td>
<td>F7</td>
<td>259</td>
</tr>
<tr>
<td>Career destinations of generic clinical teaching fellows</td>
<td>S Sadasivam, A Robson</td>
<td>F8</td>
<td>261</td>
</tr>
</tbody>
</table>
Considering the Person behind the Portfolio - Improving Educational Supervision at the Great North Children's Hospital

S Scales
C Tsilifis
N Jansen
E Riley
D Schenk
A Battersby

Does a 'Bad Day On-Call' help with F1 preparedness?

L Hemmer
B Hammond
R Oliver
N McNiven
L Klein

Does a negative surgical experience or perception regarding training during Foundation years affect the desire to improve a career in surgery?

A Lloyd
A Kosti
L Hainsworth
A Kiddle
R Bamford
I Hunter

Does assessment drive learning? Evaluating the learning experiences of doctors who take the GMC's Test of Competence validation assessments

M Baker
A Holland
A Sturrock

Evaluation of the Emergency Department, Education Fellow, Case Based Discussion Clinics

S Edwards
D Roland

Foundation Doctors' Perceived Ethics Learning Needs Should Help Guide Their Postgraduate Training

C Lavelle
N Latcham
L Corfield
R Williams
L Machin

Improving the effectiveness of trauma and orthopaedics teaching in foundation training

C Kocialkowski
L Hainsworth
O Pearce
O Beaumont
V Blackhall
I Whiteley
J Cleland
P Wilson
K Walker

iViewExpert: An educational tool designed to capture expert decision making in medicine.

S Isreb
J McLachlan
J Illing
S Attwood
H Hesselgreaves

Naturalistic observation study in the operation theatre: safety and training risk factors

S Isreb
J McLachlan
J Illing
S Attwood
H Hesselgreaves

Peer-Led Presentation Skills Training: Is it Beneficial for Speciality Trainees in Geriatric Medicine?

R Patel
H Wolfendale
J Ragunathan
R Parikh

Small Group Case Based Discussions and Specialty Specific Forums: A Model for Delivering Extracurricular Postgraduate Teaching in Palliative Care

S Case
J Schulkind
R Biggart
H Fuller
S Lang
M Flory
C Reid
Small group learning to aid broaching of lifestyle choices and advise with patients in the Physician Associate Programme

H2 274
S Din

Stories of Success: Demonstrating improved performance in junior doctors after simulation: a 12 month follow up study

H3 276
H Stirling
N Oliver

The importance of multi-speciality lead teaching in the management of a surgical patient.

H4 278
P Orchard
K Taylor
N Bashir
H Makins
J Shabbir
R Bamford

The role of cognitive hazard training in laparoscopic surgical skills acquisition: a feasibility study

H5 279
S Isreb
J McLachlan
J Illing
S Attwood
H Hesselgreaves

The use of low fidelity simulated wardrounds is effective in all levels of surgical training.

H6 280
P Orchard
R Bamford
A Humphreys
T Walker
J Coulston
J Shabbir

Transitions for Novice Anaesthetists- a qualitative study

H7 281
N Gostelow
S Rice

What are Foundation doctors' views on careers guidance?

H8 282
M Baker
T Baker

Practice Based Teaching And Learning

Acute scenarios simulation for Foundation Doctors: does it work?

J1 283
L Baxter
P Jones

Preparing to talk about dying: Using simulation training to prepare final year medical students to care for dying patients

J2 284
A Wallace
P Nalwaya
W Brown
V Westcott
P Rusby
J Rees
J Dovey
K Forbes

Roleplaying in Radiology: Preparing Medical Students for Interaction with Diagnostic Imaging Services

J3 286
W Brown
P Nalwaya
A Wallace
V Westcott
P Rusby
J Dovey
J Rees

The Dundee Longitudinal Integrated Clerkship - a phenomenological exploration of the experiences of medical students.

J4 287
Z McElhinney
M Bartlett

Transition to Clinical Learning in the MBBCh: Student perspectives

J5 288
D Cole
**Professionalism**

_A Journey to Define Professionalism for Pharmacy Students_

A Kerr  
T Pawlikowska  
K Murphy  
P Gallagher  
J Strawbridge

“Appropriate black humour... light at the end of the tunnel”:
Considerations associated with the use of occupational humour in healthcare settings.

G Finn  
L Aylott  
O Coker  
A Duenas

Embedding a culture of clinical governance that prioritises patient safety in final year undergraduate medical students at the University of Bristol

P Nalwaya  
W Brown  
A Wallace  
V Westcott  
P Rusby  
E-K. Reed  
J Dovey  
J Rees  
Z Brown  
T Browning  
L Webb  
T Scrivin  
I Chung  
S Fowweather  
H Hall P Clery  
E Sewart  
L McGeoch

Examiner bloopers - Changing Behaviour in Undergraduate Clinical OSCE’s

J Acheson  
R Westacott

Gender Identity and Sexuality Attitudes Survey

K McConville  
S Schofield  
E Hothersall

Look After Your Mate: Supporting First Year Medical Students

S Lynch  
D Rose

Medical Students Raising Concerns about Staff Members

K Ahmed  
A Kakkar  
D Lynch  
A Kerr  
T Pawlikowska  
F Boland  
J Strawbridge

Pharmacy Students’ reflections on professional values

K4 297
The tattooed doctor An exploration of the perceptions of medical students and medical school staff

K McConville
B Callaghan

K5 298

Psychometrics

Stitch-Up! A Free and Accessible Basic Surgical Skills Course

C McNeill
M Wijeyaratne
N Condie
J John
J French
N Cook
O Brown

K6 299

Selection

Evaluating an Online Training Package for MMI Interviewers

C Taylor
D Jackson
A Spruce
J C Agwu

K7 300

How do Lincolnshire science teachers view their role in helping students from under-represented backgrounds get into medical school?

R Cullum
H Kingsnorth
S Gay

K8 301

Medical School choices and selection outcomes in the UK: a retrospective study using administrative data

D Harrison
K Woolf
G Wyness
C McManus

K9 302

Widening access to medical school: Looking at the impact medical student-run interview courses have on confidence and breaking down barriers

R Flynn
S McNeill
J Wright

K10 304

Teaching About Specific Subjects

Addressing the Clinical Informatics Gap in Medical Education: a regional approach

O Arogunmati
J Davison
A Williamson
N Kumar

L1 305

Developing an airways skills workshop for foundation doctors and medical students

S Perry
J Barnes

L2 306

Incorporating Domestic Violence Teaching into the Undergraduate Curriculum through Simulation

A Demetri
F Charlton
J Taylor
J Moffatt
K Jones

L3 307

It’s all fun and games until somebody gets hurt: Using a scavenger hunt game to teach human factors to junior doctors

L Baxter

L4 308

Raising Awareness of Child Sexual Exploitation Using Simulation

R Webster
F Charlton
A Demetri
K Jones
C Broomfield

L5 309

The impact of a practical workshop based summer school for year 9 and 10 pupils for widening participation (WP) to medicine

J N Parekh
H Orme

L7 310
The Introduction Of A Multidisciplinary Medico-Legal Study Day In The Post Bawa-Garba Climate.

J Pascoe
N Cook
E Howie
P Mackey
R Innes

Use of Clinical Simulation to Improve Management of Acute Coronary Syndromes

J Spiers
M Hunsley
R Horton
L Baxter
M Brazell
S McKerron

Teaching, Learning & Assessment On Clinical Rotations

A Comprehensive Near Peer Revision Course Delivered By Final Year Medical Students To Fourth Year Students

A Al-Hadithi
M Abdelaziz
G Hourston
H Kankam

A simple intervention to improve the educational value and enjoyment of early clinical encounters for novice medical students.

T Chambers
N Devani
D Kemp
V Gkiousias
P Dilworth

Bedside Buddies - an educational and pastoral teaching program for Year 2 medical students

K Ahmed
A Kakkar
B Lonergan
P Zainuddin

Do Autobiographical books written by Doctors have the power to alter Medical Students’ Perception of a career in medicine: a qualitative analysis.

C MacSweeney

Evaluating the introduction of a ten-minute teaching session format in a Critical Care Unit

J Dunne
T Tolppa
S Brown
K Tatham

Leading the ward round: can medical students undertake a safe, independent ward round?

G Dixon
A Pereira
T Dowling
AE Stanton
C Stewart
R Hodnett
C Maclver
H Hall
Z Craft

Making the most of learning opportunities: Improving foundation doctors’ access to theatre

M Undergraduate Medical Education – Assessment

A Scoping Review on how learners use, seek and respond to feedback

M Spooner
C Duane
S McConkey
T Pawlikowska

Aligning assessment practices with the pedagogies of sustainable healthcare

K Leedham-Green
F Mortimer

Applying 'progress testing' principles to patient assessment skills

K Linton
F Oldale
J Crossley
Collaboration between students and staff supports students' summative preparation: a peer-led mock OSCE

A Nehra
W Channell
N Thakrar
R Westacott

Experience of using exam software for Anatomy Objectively Structured Practical Exams

A Venkatesh
I Cameron

Using prescribing very short answer questions to identify sources of medication errors

R Wilson
A Sam
C Fung
E Peleva
D Kluth
M Lupton
D Owen
C Melville
K Meeran

Undergraduate Medical Education - Teaching & Learning

360 Degree Patient Encounters Using Virtual Reality Technology

J Ross
C Jacobs
D Finnergan
A Pereira

A spoonful of sugar doesn't help the medicine go down: an evaluation of student enjoyment and self-rated understanding of four commonly used teaching methods

K Sales
A Beverstock
C Lewis
S Rowlands
A Kelly

A Sustainable Model for Undergraduate Surgical Education - The Peer-assisted Surgical Skills for Students Course

TSM Chu

Active teaching methods are the best adjuncts to simulation: results from a pilot study of 33 students

A Beverstock
K Sales
M Fenton-Jones
C Lewis
S Rowlands
A Kelly

Ageing Suits in Undergraduate Medical Education: learning by standing in the patients' shoes

C van't Hoff
L Webb
C Timms
C Ashton
K Jones
A Ipe

Analysis of the undergraduate medical student experience in a dedicated inner city community paediatric teaching clinic in Leicester

SK Ghosh
M Duff

Apple TV: bringing group working back into group work?

N Lander

Bleep simulation: a novel way to prepare final year medical students for transition to F1?

LJ Edwards
B Hedley-Davies

'By choice, not by chance' two years on: What has been the response at medical schools to raising the profile of GP as a career?

J Cullen
H Alberti
J Rosenthal
<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
<th>Page</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Can we train preclinical medical students to provide adequate feedback to clinical students in a formative OSCE?</td>
<td>I Mandal, L Nagib, L Tiffen, G Johnson</td>
<td>P7</td>
<td>336</td>
</tr>
<tr>
<td>Charity Begins at Home: Using Placements in the Third Sector to Improve Students’ Exposure to Marginalized Populations</td>
<td>L Webb, L Ting, F Charlton, A Demetri, R Webster, K Jones</td>
<td>P8</td>
<td>337</td>
</tr>
<tr>
<td>Consultant attitudes towards undergraduate medical student teaching</td>
<td>I Harris, D Ward, A Sitch, H Benamer, J Parry</td>
<td>P9</td>
<td>339</td>
</tr>
<tr>
<td>Cross-site interprofessional simulation for medical and pharmacy students</td>
<td>Z. Craft, H Hall, R Hodnett, C MacIver, JR Franklin-Smith, N Young, L Hanning, T Wareing, S Crawshaw</td>
<td>P10</td>
<td>340</td>
</tr>
<tr>
<td>Developing understandings of peer teaching to inspire future educators</td>
<td>J Scherewode, A Ledger, V Farnsworth</td>
<td>Q2</td>
<td>341</td>
</tr>
<tr>
<td>Do medical students understand the educational value in attending the operating theatre? An institutional report</td>
<td>I Stefanova, J Younis, T Abdel-Aziz</td>
<td>Q3</td>
<td>342</td>
</tr>
<tr>
<td>Does Building a Community Promote Wellbeing within an Undergraduate Medical Education Centre?</td>
<td>C Oliver, A Gosal, C Priest, M Young, L Bowen, Z Brown, P Davies, A Samules</td>
<td>Q4</td>
<td>343</td>
</tr>
<tr>
<td>Eating One’s Fill: The Use of Dietician-Led Workshops in Teaching Undergraduate Medical Students about Malnutrition</td>
<td>A Notghi, L Webb, C Van’t Hoff, A Weir, S Rowell, E Keenan, E Lovegrove, M Williams, C Timms, H Best, L Webb, K Jones</td>
<td>Q5</td>
<td>344</td>
</tr>
</tbody>
</table>
Emerging from Failure

R Hodnett
H Hall
D Walker
C Maciver
C Stewart
Z Craft

Enhancing Communication with Medical Students

R McCarron
P Watson
M Jones

Feedback Culture in Medical School: An Observational Study of Non-verbal Communication Simulated Communication Skills

K Sibanda
H Wells

Gamification as an Educational Tool in Undergraduate Medical Education

A Choudhary
H Ojha
A Chauhan

Improving classroom dynamics by utilising Kahoot!

P Nalwaya
W Brown
A Wallace
V Westcott
P Rusby
J Dovey
J Rees

Improving medical students’ learning experience in paediatric clinical placements

V Alam
S Bahadur
M Alam

Improving the effectiveness of simulation learning

C Kocialkowski
B Rybinski
L Hainsworth
D Yang

Innovating Problem Based Learning with Virtual Reality Technology

L Hainsworth
A Kosti
A Kiddle
A Lloyd
R Bamford
I Hunter

Introducing Near Peer OSCE Finals Revision Events for the University of Central Lancashire

K Ahmed
M Rashid
I Yaqoob

Is it possible to improve the experience of low fidelity simulation in a classroom environment?

M Kerr
A Lillis
S Blacklock
M Wilde

Is there a difference in the perception of outpatient clinic teaching, between medical students and teachers’? A mixed method study

B Dallol
B Fruhstorfer

Is there room for improvement in quality improvement education? A pilot near peer undergraduate QI teaching project

E McGeorge
M Fawcett
C Coughlan
C Lance
E Fistein
C McNicholas
F Cleugh
B Klaber
"It's not fair". Arts and humanities in medical education and their presence (or absence) in medical school promotional literature.

Junior doctor-led teaching at the bedside for undergraduate medical students: what is the BEST solution for both parties?

Just coughs and colds? Student perceptions of intellectual stimulation in General Practice

Medical Ethics and Film: an effective method of developing empathy in medical students?

Medical students' perceptions on how they should be taught prescribing

Medicine for non-scientists: Assessment of a Near-Peer Learning Intervention for First Year Medical Students from Non-Biological Science Backgrounds

MEDICS (medical education in clinical settings) Award: An Innovative approach to near-peer teaching

MedSim: Integrating clinical reasoning in undergraduate medicine through a lo-fidelity simulation programme

Mind control: increasing medical students' metacognitive ability

Mindfulness-based programmes in improving the mental health of medical students: a systematic review and meta-analysis

Moving the discussion to the cloud. Students' evaluation of Google Slides as an alternative to Blackboard's Discussion Board for collaborative learning in PBL.

No plane, no gain: Introducing a new Aviation Medicine SSC

Not another ice-breaker: Developing an innovative induction programme for medical students on clinical placements
Not Your Average Sim On-Call

Ophthalmology for Medical Students at King’s College London

Positive impact of training in conjunction with Cancer Research UK (CRUK)

Preparing medical students for practice through the novel use of virtual ward rounds

Raising the profile of Academic General Practice to medical students.

Signs Circuits - Evaluation of a high-yield course designed to increase exposure and confidence examining clinical signs for final year medical students at 3 hospital trusts

Student and Educator Perspectives on Clinical Empathy and the Teaching of Compassion

Student Designed Simulation in Sports Medicine

Student stress response in simulation learning

Student’s perception and experience of a new knowledge-swap method of teaching and learning in medical education: An adaptation of a Swedish method

SWAG - Sustainability Week At Gloucestershire Academy: An innovative programme to raise awareness of sustainability in healthcare for medical students
<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
<th>Page</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>The adjunct benefits of a revision symposium exploring conceptual</td>
<td>S Pinder, M Iyenkopolar, N Ali, JAW Dalton, PA Patel</td>
<td>U5</td>
<td>385</td>
</tr>
<tr>
<td>themes for medical finals</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Effectiveness of Peer to Peer Learning and finding of best practice to manage Fatigue.</td>
<td>J Rudin, Z Robertson, J Fisher</td>
<td>U7</td>
<td>386</td>
</tr>
<tr>
<td>The potential effect of social media on Saudi Arabian medical students' concentration levels</td>
<td>S Qazi, A Siddique, Z Ahmed, H Talib, AM Mazhar</td>
<td>U8</td>
<td>387</td>
</tr>
<tr>
<td>The Role of Radiology in Undergraduate Medical Education: A Systematic Review</td>
<td>C Chew, P Cannon, PJ O'Dwyer</td>
<td>U9</td>
<td>388</td>
</tr>
<tr>
<td>Thematic analysis of student reflections on clinical cases during a psychiatry placement</td>
<td>J Cunliffe, J Barker, W Melton, H Crimlisk</td>
<td>U10</td>
<td>389</td>
</tr>
<tr>
<td>&quot;To Me, To You“ Improving Medical Students' Oral Case Presentation Skills</td>
<td>C MacIver, J Choulerton, R Hodnnett, H Hall, C Stewart, Z Craft</td>
<td>V1</td>
<td>390</td>
</tr>
<tr>
<td>To what extent do newly qualified doctors feel prepared to care for mothers diagnosed with a stillborn baby.</td>
<td>S Agnihotri</td>
<td>V3</td>
<td>391</td>
</tr>
<tr>
<td>Transforming induction for medical students with the use of in situ simulation</td>
<td>L Bowen, C Priest, Z Bush, M Young, A Gosal, C Oliver, P Davies, A Samuels</td>
<td>V4</td>
<td>393</td>
</tr>
<tr>
<td>Transition Into Practise</td>
<td>A Hopkins</td>
<td>V5</td>
<td>394</td>
</tr>
<tr>
<td>Understanding myself in the workplace - can an innovative half day workshop help final year medical students feel more prepared for transition to working as a junior doctor?</td>
<td>K Jarrett-Peet, K Murphy</td>
<td>V6</td>
<td>395</td>
</tr>
<tr>
<td>Why medical students change career preferences: A phenomenological study</td>
<td>H Alberti, A Singh</td>
<td>V8</td>
<td>397</td>
</tr>
</tbody>
</table>
TEL Abstracts presented as e-Posters *(themed within TEL)*

<table>
<thead>
<tr>
<th>Theme (within TEL)</th>
<th>Abstract Title</th>
<th>Authors</th>
<th>Mini Poster Number</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>E-Learning</strong></td>
<td>Harnessing the power of artificial intelligence to drive innovation in undergraduate medical education</td>
<td>A Sheikh R Adel</td>
<td>TEL11</td>
<td>399</td>
</tr>
<tr>
<td></td>
<td>Making Technology Enhanced Learning work in the acute clinical setting: delivering the promise.</td>
<td>T Hossain E Cox L Velauthar J Malawana</td>
<td>TEL4</td>
<td>400</td>
</tr>
<tr>
<td></td>
<td>O&amp;G Handbook App; A pilot project</td>
<td>R Howitt R Tomlins</td>
<td>TEL5</td>
<td>402</td>
</tr>
<tr>
<td></td>
<td>Shaking up Immunology Teaching at the University of Aberdeen</td>
<td>D McClurg R Hughes S Hapca D Bean D Wandless I Crane S Stone</td>
<td>TEL12</td>
<td>403</td>
</tr>
<tr>
<td></td>
<td>Use of Virtual Reality in Surgical Education Focusing on Non-technical Skills Training</td>
<td>U Keshwala V Dimitrova N Quinton</td>
<td>TEL6</td>
<td>404</td>
</tr>
<tr>
<td><strong>Faculty Development</strong></td>
<td>The Great Barrier Debrief:Using 360 Video to Enhance Simulation Debrief</td>
<td>S Perry G Dixon J Barnes A Pereira M Natarajan</td>
<td>TEL8</td>
<td>405</td>
</tr>
<tr>
<td><strong>Practice Based Teaching And Learning</strong></td>
<td>Simulation in a district general hospital; a six-month evaluation shows the juice is worth the squeeze</td>
<td>L Baxter S Panter M Jachuck</td>
<td>TEL1</td>
<td>406</td>
</tr>
<tr>
<td><strong>Undergraduate Medical Education - Teaching &amp; Learning</strong></td>
<td>Can virtual reality clinical scenarios improve medical students' clinical learning?</td>
<td>T Bird N Mahmood V Rodwell F Surti J Sturgeon A Dharmaratnam E Tamlyn Z Shahid M Judge J Shoker</td>
<td>TEL3</td>
<td>408</td>
</tr>
<tr>
<td></td>
<td>Enhancing Vascular Examinations with the Use of Virtual Reality Fully Immersive Technology teaching</td>
<td>CL Bee L Hainsworth I Hunter</td>
<td>TEL2</td>
<td>409</td>
</tr>
<tr>
<td></td>
<td>Pod-casting the Light on Technology in Medical Education</td>
<td>L Webb L Ting K Jones</td>
<td>TEL13</td>
<td>410</td>
</tr>
</tbody>
</table>
The impact of 'pause and debrief' simulation training on acquisition of knowledge in pre-clinical medical education.

B Rybinski
C Kocialkowski
K Mincher
H Lewis
I Hunter
R Bamford
Background:
Neurological disease comprises 7.1% of the global burden of disease for all causes and ages measured in disability adjusted life years. However, ‘neurophobia’ – the fear of neural sciences and clinical neurology [...] due to students’ inability to apply their knowledge of basic sciences to clinical situations – is endemic. Therefore, it is imperative that tomorrow’s doctors are trained to be comfortable with neurological concepts, recognising the subtle signs of neurological illness to facilitate early diagnosis and treatment. Early patient experiences may help combat fear of neurology.

At Oxford University, we have developed a programme wherein patients with neurological disorders with distinguishing signs (multiple sclerosis (upper motor neuron), Parkinson’s (extrapyramidal) and peripheral neuropathy (lower motor neuron) become active participants in the delivery of neurology education as Expert Patient Tutors (EPTs). EPTs are trained to educate students about key elements of history and neurological examination signs specific to their disease while providing constructive feedback about students’ approach facilitated by clinician educators. Feedback has been outstanding. Several students report increased comfort and familiarity with fundamental neurological concepts.

To ensure this invaluable educational paradigm reaches beyond Oxford, an electronic EPT Programme ‘toolkit’ is under production to facilitate standardised dissemination of this successful model to diverse institutions. The recently established education partnership between the Universities of Oxford (UK) and Quinnipiac (USA) provides a unique opportunity to develop the toolkit to be relevant and accessible to medical school curricula across both sides of the Atlantic.

Aims of Visit:
- Meet with Quinnipiac exchange students who experienced EPTs in Oxford to discuss the impact on their education.
- Review EPT toolkit resources with relevant Faculty in the context of their curriculum

Results:
Quinnipiac’s existing curriculum includes administrator-facilitated sessions with ‘standardised patients’-actors trained to have different clinical conditions. EPTs would enhance their curriculum and the visit emphasised a number of elements essential for an effective toolkit:
- Logistics of EPT recruitment
- Importance of responsible clinician overseeing EPTs
- Sample information letter for prospective EPTs
- Clarification effective feedback workshops to train EPTs
- Handbook accompanying the electronic toolkit explaining the specifics of replicating the programme in a sustainable way.
- Potential to link EPTs to comprehensive care and carer perspectives

Discussion:
The toolkit is nearing final production. The insight gained from visiting Quinnipiac will facilitate the ‘internationalisation’ of this innovative teaching model ensuring students will have the confidence and ability to approach neurological disease compassionately and effectively, eradicating ‘neurophobia’.

400 words

References:
3. Davies R. Comments on: Twelve tips for developing clinical reasoning skills in the pre-clinical and clinical stages of medical school. Medical Teacher. 2019 Mar 27:1-.
EDC Educator Development Award 2018

Up the Creek – Teaching in Challenging Environments

G Curnow
University of Exeter

As part of my Medical Elective, I spent three weeks working with a group of doctors, nurses, and allied health professionals in Bocas del Toro, Panama. We went from isolated community to isolated community, providing medical aid to the underserved population. Having never taught in anything other than very sterile conditions, I was excited to have the opportunity to teach in a more rustic setting. From opportunistic “bedside” teaching surrounded by stray dogs, to case presentations in a 32°C hut, this was very different to teaching I had done prior. As someone with a passion for teaching, I have three tips for people looking to teach in similar circumstances: be flexible, look out for teaching opportunities, and always bring bug spray!

Thursday 4th July 11-1130, Carron 2
Back to reality: Exploring the use of medical reality television as an adjunct to case-based learning with undergraduate medical students

F Osborne
Northumbria Healthcare

Background
Over the last decade, the use of technology to enhance learning in undergraduate medicine has rapidly expanded and diversified. The generational expectation is that learning should be convenient, relevant and technologically enhanced. Meeting with this trend, medical educators have been progressive in using multimedia technology. However, one area yet to be explored is using medical reality television to facilitate clinical learning. This strategy does not feature in published medical educational literature, but promising research is emerging from other disciplines.

Methodology
A pilot programme using medical reality television clips as a focus for case-based learning was developed for final year undergraduate medical students. Following promising early evaluations, the strategy was expanded to other specialities and formally reviewed. The research questions were:

- To what extent does using reality TV as part of case-based learning stimulate an emotional response in students?
- To what extent does using reality TV within case-based learning develop medical students’ understanding of their learning needs in the clinical environment?

A case-based methodology was used to address the research question from an interpretivist perspective. The theory of ‘anchored instruction’ was applied as a framework for interpreting students’ experiences. Data was triangulated from two sources. Two experienced educationalists observed a teaching session of 20 students who took field notes. Five students then took part in semi-structured interviews. Data was analysed through an inductive thematic analysis.

Results
A diverse range of emotional responses to the reality television clips was expressed including: excitement, amusement, concern, nervousness, sadness and joy. Interviewees reported the reality television cases made the clinical scenarios more memorable and realistic. Key themes identified were that students felt more engaged and were stimulated to reflect on their future practice. Several students also identified gaps in their clinical knowledge such as interpreting results, practical aspects of prescribing and end of life care. However, they considered the reality television clips inferior to real patient interaction.

Discussion
Students perceived reality television as a highly realistic and relatable medium and a fun, memorable way to contextualise learning from the classroom to real life, a finding mirrored in previous studies in other fields. The high degree of emotion expressed may explain the improved subjective memorability of the cases according to the established link between memory and emotion.

Conclusion
Medical reality television can provide a useful adjunct to case-based learning and should be valued alongside other technologically enhanced learning strategies.

References
7) Robson, C. and K. McCartan Real world research : a research for users of social research methods in applied settings.
EDC Innovative, Interesting and Prize-winning Work 2019:
How the Gender Imbalance Impacts Female Cardiologists
J Peal
Newcastle University

Background:
Men comprise 80% of the consultant cardiology workforce.(1) Compared to other medical specialties, cardiology demonstrates a disproportionately low representation of women. Currently, there are no studies exploring how training in a male-dominated medical environment may impact women.

Methodology:
The study was designed within the theoretical perspective of post-positivism, whilst drawing on traditions of critical social theory.(2)
Aim
Investigate the impact of gender imbalance on women in a male-dominated specialty in order to guide institutional reform.
Study Questions
• How does the gender imbalance contribute toward gender tensions in cardiology training?
• How are women navigating a male-dominated training environment?

Snowball sampling enabled recruitment of 15 participants in the United Kingdom. Eight registrars and seven consultants in cardiology underwent semi-structured interview lasting 22-47 minutes. Interviews were recorded, transcribed verbatim and twice-checked for accuracy. The interview schedule was finalised following two pilot interviews. The 5 step approach to Framework analysis (3) was followed. Fourteen codes were generated which, alongside literature review (4-8), contributed to the final five themes. Methodological rigour was ensured by following a qualitative checklist (9) and ethical approval was granted by Newcastle University.

Results:
The main themes identified were: the contextual factors of the specialty, the external factors of a power hierarchy, the identity traits of the participants, the gender tension experienced and the adaptations women undergo to succeed. Cardiology is a competitive, procedure-heavy specialty, with high expectations to perform coming from seniors and peers. Women entering cardiology are determined, passionate and more likely to demonstrate Type A personality traits.(10) Women identified a need to increase assertiveness and leadership to be effective cardiologists. Gender tension mainly arises with pregnancy and less than full time working. Women may experience internal conflict as they try to manifest behaviours expected of the female gender alongside the more ‘masculine’ behaviours required by the specialty, invariably creating a ‘scary female cardiologist’ stereotype. Thirteen had experienced sexist, misogynistic attitudes, but many chose to ignore them. Women experience inferior role allocation and lack of respect but adapt to this with increased hard work, assertiveness and smarter dress. Those with a resilient self-concept were least likely to feel the need to adapt identity or behaviour to thrive in cardiology. Those who underwent the greatest degree of identity adaptation had more negative feelings towards the masculinised training environment.

Discussion:
This is the first study examining how a gender imbalance may create unique challenges and adaptations for women. Women recognise the male-dominance within cardiology however, generally feel aligned with the ‘cardiology role’. Junior trainees or those with values more aligned with feminine-traits were more likely to be dissatisfied with the male-dominated environment. Harmony between ‘self’ and ‘cardiologist’ is more likely to be achieved on working autonomously as a consultant. Further study into identity traits at entry and exit of cardiology training would add insight into how this may be in flux. An investigation into women and men training in other gender-dominated contexts may increase our understanding of how gendered behaviour might vary in different settings. Continued challenge of ambivalent sexism (11) alongside increased representation of women in cardiology should facilitate the attitude shifts required to make cardiology more acceptable for all.

References:


Thursday 4th July 11.30am-12.10pm Carron 2
EDC Innovative, Interesting and Prize-Winning work 2019:  
**Time for Dementia - A new way of seeing**  
S Daley, Y Feeney, J Wright, S Banerjee

**Background:**  
In the UK there are estimated to be around 850,000 people living with dementia, and this number is set to rise. There is a need for the healthcare workforce to have the sufficient knowledge and skills to ensure that people affected by dementia receive the best possible care and support (1). In practice, this knowledge is often lacking. At under-graduate level, medical students often lack a true understanding of what it like to live with dementia. Current teaching approaches rarely enable students to experience and create a person-centred approach to their care, or to build the compassion and understanding needed to help those affected by dementia. In response to this challenge, the Brighton and Sussex Medical School have developed the Time for Dementia programme (2). The programme takes an innovative approach to dementia education for medical students and other undergraduate health care students by providing longitudinal contact with families affected by dementia. Students visit a family affected by dementia over a two period in order to improve student knowledge, skills and attitudes.

**Methodology:**  
The aim of this study was to evaluate the Time for Dementia programme in terms of process and its impact on medical student attitudes, understanding, knowledge and behaviours towards dementia, using a mixed methods design. Quantitative outcomes (dementia knowledge, attitudes and empathy) were collected at baseline, 12 and 24 months for intervention group students (n=274) as well as a control group of medical students (n=112) at a similarly sized medical school. Individual qualitative interviews and focus groups were undertaken (n=38 students) at 12 and 24 months as well as satisfaction surveys at 12 and 24 months.

**Results:**  
Compared to medical students who did not participate in TfD, quantitative evaluation shows statistically significant improvements in student outcomes including: Dementia Knowledge (n=247, coef=1.63, p<0.001) and Approaches to Dementia Questionnaire (n=276, coef=2.19, p<0.003) and Dementia Attitudes Scale (n=278, coef=6.55, p<0.001). Qualitative interviews and focus groups with medical students have highlighted improvements in psychosocial understanding, awareness of the carer role and an understanding of the lived experience of dementia.

**Discussion:**  
Our research has demonstrated positive impacts on the medical students that have been through the programme. Our medical students have received an education programme which will equip them to understand the needs of patients with dementia, regardless of the area of medicine which they practice in. They will be the doctors of the future, who will be able to share their dementia knowledge and expertise with future patients, carers and colleagues. Our families are the teachers in Time for Dementia and our medical students the beneficiaries of their wisdom and lived experience. Our outcomes have led to the programme being funded across the region (Kent, Surrey and Sussex) to a much wider group of undergraduate healthcare students. The programme is also opening new sites in the South West of England and developing a proof of concept programme for another condition, Autism, to start in 2020.

**References:**

Thursday 4th July 11.30am-12.10pm Carron 2
ERC Research Paper Award FINALIST 2019:
PERFORM: Performance Enhancing Routines for Optimising Readiness using Metacognition for the Management of Acutely Unwell Patients
H Church, D Murdoch-Eaton, J Sandars

1. Academic Unit of Medical Education, University of Sheffield, Sheffield.
2. Edge Hill University Medical School, Ormskirk.

Background
Junior doctors experience negative emotions and behaviours when managing acutely unwell patients (Tallentire et al., 2011), which can interfere with cognitive tasks, such as synthesizing information and decision-making (Lundin et al., 2018). Despite this, very few interventions have attempted to equip junior doctors with the skills to manage these negative emotions and behaviours.

Given the similarities between medicine and sport, Pre-Performance Routines (PPRs) are a potential solution. Athletes apply these to minimize the impact of negative emotions and behaviours during high-pressured events (Cotterill, 2010). However, PPRs are generally applied prior to simple, closed tasks rather than during compound, multiple-skill tasks. Insight into when and how individuals optimally apply routines is also limited.

PPRs are transformed into Performance Enhancing Routines (PERs) by the conceptual PERFORM model, in which the individual’s metacognition (Efklides, 2008) guides the selection, adaption and evaluation of the PER. The PERFORM study research question considered whether this model could improve junior doctors’ emotional and behavioural control during acutely unwell patient management.

Methodology
PERFORM was an action research study which used concurrent mixed-methods throughout its three phases. The Exploratory phase included an international scoping review of how medical students and junior doctors are currently taught to manage acutely unwell patients. The Pilot phase trialled the coaching of the PERFORM model to junior doctors. The Full Intervention phase evaluated PERFORM within simulation and real patient encounters using reflective logs, semi-structured interviews, Think-Aloud commentary and self-efficacy scores.

Findings
PERFORM model application significantly improved self-efficacy of control over negative emotions and behaviours during an acutely unwell patient in situ simulation (p=0.003). Qualitative data revealed a three-pronged effect on the doctor, their patients and their interprofessional relationships. The doctors individualised their models and PERs and supported the wider use of PERFORM, particularly during the transition to graduation.

Conclusion
To our knowledge the PERFORM study is the first to evaluate individualized, self-regulatory application of PERs based on sport psychology by junior doctors to improve emotional and behavioural control during acutely unwell patient management.

Its results support previous findings that doctors do experience negative emotions and behaviours during acute patient management; these can affect clinical performance; and they currently lack strategies with which to manage them. Potential future work includes wider rollout to newly qualified doctors, introduction to other healthcare professionals and/or feedback into sport psychology.

References


Thursday 4th July Carron 1 4.35-6.05pm
ERC Research Paper Award FINALIST 2019:
How can tomorrow’s doctors be more caring? A phenomenological investigation
H Gillespie
Queens University Belfast

Introduction
Many are motivated to become doctors because it is a caring profession. Medicine is, in that sense, a vocation. But in recent years, the focus of attention has changed from responding to one’s vocation by becoming a caring doctor to being required to demonstrate professionalism, of which providing care is part. [1]

We reasoned that, whilst regulatory bodies define care and devise professionalism frameworks, patients should be the ones to say what caring is. We recently completed a scoping review of all published literature in which patients, rather than professionals, spoke of the essence of caring. [2]

Aim
The aim of this second investigation was to build on the literature review by giving patients a live voice in education for caring. This research returned to the phenomenon of caring by asking: How do patients experience doctors being (un)caring?

Methods
With ethics approval, two general practitioners purposefully recruited 10 patients with broad experiences of healthcare. A researcher asked them to depict a memorable episode of care using Pictor diagrams. [3] She analysed transcripts of participants’ audio-recorded experiences, also in depth, using a template method. Finally, we assembled a narrative description of the phenomenon of caring using participants’ own words.

Results
Caring, as experienced by participants, was, above all, genuine. Being genuine had three distinct facets: Caring doctors allowed their own individuality to interact with patients’ individuality; they engaged with participants to form relationships and communicate; and they did little things that went ‘above and beyond’.

Discussion
These findings provide medical educators with a novel interpretation of caring that is truly patient-centred. Coupling technical proficiency with human qualities – being genuinely empathic and respectful – within doctor–patient relationships is the essence of caring. These findings also give methodological insights: they show how interpretive phenomenology can give patients a voice; they show the value of the Pictor technique in medical education research; and they show how triangulating primary and secondary investigations, which share an epistemological orientation, can make research findings more valid.

Conclusion
A scoping review and phenomenological study have brought patient’s voices to the fore. They have told us that caring is important and integral to our profession. Our educational implication is that we should repeat relentlessly that neither competence nor caring is, alone, sufficient. Both are necessary, and integrating the two into a genuinely caring medical identity should be every (student) doctor’s aspiration.

References

Thursday 4th July Carron 1 4.35-6.05pm
Supervised workplace learning in postgraduate medical training: a realist synthesis

A Wiese¹, C Kilty¹, D Bennett¹
¹Medical Education Unit, School of Medicine, University College Cork, Cork, Ireland

Introduction
The design of postgraduate medical education (PGME) is underpinned by the premise that doctors learn through work¹ and supervisors have a central role in supporting trainees’ workplace learning². There are insufficient theoretical explanations in the literature on how workplace learning happens through supervisor-trainee interactions. Theories of workplace learning and apprenticeship provide insights into PGME in general terms; however, they do not provide detail about how PGME works on the ground. The clinical learning environment provides the social, cultural, and material context for workplace learning in PGME³. To optimise conditions for learning, those tasked with the design and delivery of PGME need to understand in detail the processes of workplace learning, and the influences of social and cultural contexts on those processes. We conducted a realist synthesis to develop a theory of supervised workplace learning specific to PGME.

Method
Realist synthesis is an interpretative theory-driven narrative summary of the literature describing how, why and in what circumstances complex social interventions work. Realist synthesis translates the findings of empirical studies into context, mechanism and outcome (CMO) configurations, which state that in a certain context a particular mechanism generates a particular outcome. We followed the procedures outlined in the RAMESES Publication Standards for Realist Synthesis and related training materials⁴.

Results
We reviewed 5197 papers and selected 90. Synthesis revealed three interrelated workplace learning processes occurring informally between supervisors and trainees in the course of patient care, each underpinned by a pair of mechanisms: supervised participation in practice (entrustment and support seeking); mutual observation of practice (monitoring and modelling), and dialogue during practice (meaning making and feedback). These mechanisms result in outcomes of PGME. Contexts shaping the outcomes of these mechanisms were identified at individual, interpersonal, local and systems levels. The findings are reported as a framework describing each mechanism and its outcomes and outlining in detail how individual, interpersonal and systems contexts shape their operation and outcomes.

Discussion
The realist theory of supervised workplace learning described in this paper provides a useful framework for the design of supportive learning environments. Our theory demonstrates clearly the two-way nature of supervision and that effective PGME between supervisor and trainee is shaped by both, and requires leadership from both. We have shown the importance of positive supervisory relationships, built over time, and stress the need to nurture and preserve them. Our findings equip supervisors, trainees, hospital managers and programme directors with the knowledge needed to design, participate in and support effective PGME.

References:
1. Greenaway D. Shape of Training. London: General Medical Council 2013

Thursday 4th July Carron 1 4.35-6.05pm
"Pretending I’m competent": a longitudinal exploration of medical students acting and performing as if professional
E Stubbing
University of Aberdeen

Introduction
To earn society’s trust, medical students must develop professional values and behaviours via a transformative process, from lay person to doctor. Yet students seem to be expected to epitomise the values and behaviours of a doctor from the outset of medical school. Medical students in their first and second year are found to experience a sense of pressure to live up to expectations of professionalism and respond to this by acting as if already competent and beyond their level of training. Although this behaviour could be considered to support the formation of a professional identity it could also have unintended consequences for patient safety. Yet, we know little about this experience as students’ progress through medical school, whether tensions remain, if students continue to act as if competent and therefore aim to explore this further in final year medical students. Advancing this understanding will provide new insights into the complex process of identity development in medical students and assist educators in how best to support students through this experience.

Methods
Based on a qualitative exploratory case study methodology, within a constructivist paradigm biannual focus groups were undertaken to follow up experiences of expectations of professionalism and acting as if competent with seven final year medical students. Four focus groups were undertaken using a combination of open ended and follow up questions. Data was recorded and transcribed then thematic analysis was undertaken to interpret the data.

Results
Preliminary findings identify some students still acting as if professional (competent) with, acting as being essential for their development and acting to cope with emotional and stressful situations. Students also discuss how they no longer feel the pressure to act as if professional (competent) now being aware of unrealistic expectations and increasingly able to identify with the role of a doctor.

Wednesday 3rd July 3.30-3.50pm Alsh 1
The aim of this qualitative study was to understand the experiences of UK undergraduate international medical students in problem-based learning (PBL) groups. An inductive approach was taken, with semi-structured interviews with current UK medical students providing the data source. These were transcribed and thematically analysed, with external verification of thematic index provided. Seven Year 1 or 2 students (four international and three domestic) at a South West of England medical school offering a hybrid curriculum, including PBL, were interviewed. Four key themes emerged from the collected data: 1) student experiences of working in small groups, 2) student experiences of learning in a student-centred environment, 3) the role of the facilitator, and 4) interpersonal communication. In each of these domains, there were barriers identified that were unique to international students, as well as those experienced by their domestic peers. This study has revealed the unique barriers faced by international students in PBL. Specifically, international students appeared to have difficulties with participation in group discussions as a result of a language processing barrier, and with communicating with their peers in a social context. Full engagement, within the learning environment and socially, have been shown to contribute to better outcomes for learners, implying international students in PBL may be at a specific disadvantage to their peers. To reduce the processing burden on international students, facilitators should slow group discussions to ensure international students have time to consider and articulate their responses. Further, the use of ‘buzz groups’ – several smaller groups formed within the main PBL group – could facilitate greater international student involvement. Facilitators should also include small group activities that promote student friendships within PBL groups, and ensure that their team bonding techniques, such as humour and anecdotes, do not exclude international students.

Wednesday 3rd July 3.50-4.10pm, Alsh 1
Transitions as transformations in learning orientations and the role of the undergraduate medical curriculum
V Farnsworth
University of Leeds

Transitional from school to undergraduate studies in medicine demands a transformation in learning orientation. The shift is from the performance-oriented learning, which is often cultivated in schools, to the learning orientation that defines self-regulated learning (1, 2). Orientations to learning are linked to ability mindset where a fixed ability mindset is an implicit theory that ‘ability leads to success’ and a growth mindset is the idea that effort leads to success (3). In this research I have explored the mechanisms that can support this important learning orientation transformation. I propose that socio-cultural and activity theory concepts (4) can help explain how the medical curriculum interacts with students’ learning orientations and ability mindset.

The study illuminates the process of transition, in terms of learning orientation transformations, through an analysis of 9 individual interviews with Y2 medical students. Interviews lasting 40 - 60 minutes explored students’ ideas about learning, ability mindset and the medical curriculum. Specifically, interviewers asked about their prior learning in school, their learning strategies since entering the MBChB and whether and how these have changed. Reference was also made to classroom discussions about the concept of ‘ability mindset’ and a ‘quiz’ they took. Finally, students were asked to mindmap their transition experience and things that helped them in this transition.

The study suggests that a transition in learning approach can occur through secondary contradictions introduced by the new education activity system they experience. For instance, transformation in learning approach can occur through a secondary contradiction faced when previously used study strategies (e.g. hand-writing lecture notes) are insufficient in an educational system that presents students with more content and through large lectures. The lecture experience can prompt exploration of alternative strategies which support ‘deep’ rather than ‘surface’ level approach (5). For some, this contradiction is only recognised when assessment results are lower than the student expected. Some also noted a difference in the exam feedback which is general and not specific to the individual exam questions, as they had been given in school. Experiencing this change led some to seek out strategies such as self-assessment, which also reflects a learning orientation (6).

Participants expressed a growth mindset in their persistence to find ways to improve their results. Their commitment to study medicine and also the placement experience seemed to fuel this persistence. Applying activity theory, which postulates all activities are goal-directed, I suggest that the interactions with patients supported the formation of a new goal which mediated transformations in learning orientation. While schooling focused on gaining entry to medicine, in medical school the goal shifts to becoming effective and safe healthcare practitioners. This new goal directs the activity of learning to become more self-regulated.

The study provides a basis for theorising the role of the curriculum in supporting successful transitions in terms of learning orientation. Early placement experience, assessment for learning and talking about learning play a crucial role in the transition to a self-regulated learner. The transformation is a process which seems to begin in Term 2 and is triggered by recognition of differences in what it means to be a ‘student’. We can support this transition on a curricular level, but support should not be viewed as bridging the passage from school to university learning, but as identifying ways to support students to resolve secondary contradictions when they confront these. The paper concludes with some of the factors that could be mediating this process and suggests areas for future research.

References
Small Grants Recipient 2018
Simulated Patients’ Experiences and Perspectives of an Interprofessional Ward Simulation
V O’Carroll 1, M McKinley, I Burns, H Geddes, A Brown
1University of St Andrews

Introduction
With evidence showing that interprofessional education (IPE) has a positive impact on healthcare delivery, there is increased momentum for IPE in healthcare education (1). Interprofessional simulation-based education (IPSE) is an effective way of preparing healthcare students for future collaborative working (2). However, experiences of IPSE have mainly been reported by students and tutors with limited understanding of the experiences of simulated patients (SPs) (3).

Undergraduate nursing, medical and pharmacy students from three universities participate in an annual interprofessional ward simulation (IPWS). Students work in interprofessional teams to provide care within a simulated ward environment. Members of the SP bank contribute to the IPWS by playing the role of a simulated patient, relative, or carer.

SPs make an important contribution to the clinical competence of healthcare students, and their involvement in IPE highlights the importance of collaboration to deliver safe, effective and person-centred care (4, 5, 6). This qualitative study explored the SPs experiences and perceptions of the interprofessional care they received.

Methods
Following the IPWS, three focus groups were arranged. A purposive sampling strategy was used to maximise sample diversity. A facilitator and note taker not involved in the delivery of the IPWS conducted the focus groups. The focus group audio recordings were transcribed, and the data was analysed thematically to determine the SPs experiences and perspectives of the IPWS.

Findings
As work is currently in progress with this study, this presentation will disseminate the findings from the data analysis. It is expected that this analysis will provide insight into SPs experiences and perspectives of the IPWS.

Conclusion
It is envisaged that the findings will provide rich feedback for students involved in the IPWS and guide them with their future interprofessional practice. It will assist in guiding the design of future interprofessional simulated based training in healthcare education. Furthermore, this study will provide insight into SPs experiences and perspectives and may help to determine potential markers of quality interprofessional practice. Finally, we believe that this may help in the future design of a tool to measure or evaluate interprofessional practice in a real healthcare setting.

References

Wednesday 3rd July, 4.50-5.10pm Alsh 1
Sir John Ellis Student Prize Winner 2019
Peer Marking for Written Assessment
T Fraser
King’s College London

Background
Peer Assisted Learning is a well-established and effective method of teaching with multiple identified benefits (1,2). Despite these benefits, concerns about the accuracy of peer assessment remain (3). While assessing the accuracy and feasibility of a feedback tool for peer-marked written assessments, we have found several perceived barriers for peers delivering high-quality, accurate feedback on written work through qualitative analysis of the cohort’s feedback on the process.

Methodology
Ethics approval was granted by KCL and supervision was provided by KCL staff. Twelve students were enrolled to submit 3000-word essays written for their student selected components. Essays were anonymously submitted and randomised, each student submitted one essay and marked four of their peers using a standardised marking scheme. Students who failed to submit an essay or marks were excluded from the study. The qualitative peer marks for each essay were then assessed for reliability and validity alongside a faculty mark. A qualitative thematic analysis of the written feedback was carried out using double coding. After moderation, feedback was returned to students. Finally, a focus group (8 participants) and questionnaires (10 respondents, 83.3% Response Rate) were conducted to explore the students’ perspective into what they learnt from marking peer’s essays and what insight they received from triangulated written feedback from peers. Anonymised transcripts from the focus group were thematically analysed to identify benefits and barriers to peer-marked written assessments.

Results
Themes found students learnt models on how to give constructive feedback, explored what constituted a good essay and students gained insight into use of mark schemes and felt this helped them prepare to write their own work in the future. Students found peer-feedback palatable and enjoyed the higher quality and quantity of written feedback that peer markers provided compared to their own subjective experience of faculty markers, however several expressed concerns regarding receiving marks from their own cohort.

Discussion
Peer marking has historically been seen to be of less value than the marks of faculty, however this study showed that peer marks provide marks congruent with faculty marks. Furthermore, feedback from the cohort showed that students provide a greater quantity of specific feedback than faculty which students found useful, as seen in previous studies (4). The perceived “colleague-friend factor” is a barrier to effective peer marking which can be improved through appropriate training.

Ongoing work includes restructuring the assessment tool based on the feedback of the cohort. This will be trialled with a cohort of around 400 students this academic year.

References
2. Cate O Ten, Durning S, Cate OTEN, Durning S. Peer teaching in medical education: twelve reasons to move from theory to practice Peer teaching in medical education: twelve reasons to move from theory to practice. 2009;

Wednesday 3rd July 2-2.30pm Lomond Auditorium
Describe the teaching or other educational activity for which you would like to be considered for this award. In March 2019 we held the first Liverpool Student Doctor Simulation event (LivDocSim); a four-day course attended by all 5th year medical students (266) at the University of Liverpool. The education fellows created 9 simulation scenarios and 13 complementary workshops including virtual reality simulation focused on preparation for practice. Content covered common FY1 skills and tasks including handover, escalation, on-call imaging, prescribing, wellbeing and managing challenging/deteriorating patients. Students rotated into a hi-fidelity simulated 12 bedded acute assessment unit, equipped with an essential handover, simulated patients, clinical notes/charts and emergency bleeps. The fellows were also involved in creating a website for resources, training and recruiting 70 faculty.

Explain why this activity is particularly relevant to trainees or your clinical area and its relevance to the wider educational community. Goldacre et al (2003) showed only 36.3% newly qualified graduates either strongly agreed or agreed that training had prepared them for clinical practice. We also collected data prior to LivDocSim which supported this with 16% agreeing that ‘I feel prepared for practice as an F1 doctor’. Monrouxe et al 2018 published findings on new graduate doctor unpreparedness, mapped to the GMC Outcomes for Graduates. These publications were used to inform our learning objectives for simulation and workshops. We ensured continued development for our 70 multidisciplinary faculty from across the region through individualised timetables, training and peer observation; this was essential to ensure future running of the course annually and maintaining alignment with trust-based training.

Summarise any feedback you have gained from learners, peers or supervisors regarding this educational practice, and how this has influenced your progression in medical education. Post course data showed student preparedness for clinical practise increased to 85%. The focus groups were also powerful in providing the student’s perspective: ‘I think that’s a lot more useful than just knowing the knowledge so I think the simulations helped make that transition’. Feedback has also highlighted that as faculty we need to increase learner autonomy and allow students to select areas most relevant to their needs. We also recognise that as fellows we have learnt a great deal on an operational level and identified scope to improve our qualitative research capabilities.

Summarise the educational rationale for this project and how you used current evidence to develop your idea. Morgan et al 2018 supports improving graduates’ preparation for practice through simulation. Simulation draws upon a plethora of educational theory, namely cognitivism and identifies with all levels of Bloom’s taxonomy. We address all of Issenberg et al 2005 effective simulation features with a priority on authenticity of the scenarios. Debrief followed all simulation, considering both clinical and non-technical skills. As per Kolb’s cycle of learning, the students were encouraged to reflect on their experiential learning before progressing to further experimentation in the workshop.
Describe the teaching or other educational activity for which you would like to be considered for this award. Be specific about your own involvement from conception to delivery.

We present ‘Studybuddy’; an educational board game to facilitate undergraduate students’ learning and revision of dermatology. We are five educational fellows who have gamified dermatology. We developed this game from initial prototype to a printed board with playing cards. The cards are categorised into four groups (describe, discuss, draw and decide) which correlate to visual, auditory, kinaesthetic and reading learning styles. Questions have been blueprinted to a medical curriculum. Teams move around a board by answering questions correctly. Game-play elements include luck, competition, time-pressures and rewards. Our game allows students to revisit topics and is a memorable learning event. Revision workshops using the game have been run with positive feedback and results.

Explain why this activity is particularly relevant to trainees or your clinical area and its relevance to the wider educational community.

Medical students are subject to high levels of stress and anxiety due to the large volumes of knowledge they are required to accumulate; particularly when revising for exams. Dermatology is difficult to learn due to challenging nomenclature and students usually have limited exposure. Incorporation of game-play into learning can alleviate some of this stress, whilst learning in a relaxed, fun and safe environment. Students can self-direct learning using this game; rules are easy to understand and answers are available on playing cards to facilitate further discussion and learning. Topics are clinically focused to support learning. Communication, teamwork and professionalism skills can also be developed through game-play. This project has potential to be expanded.

Summarise any feedback you have gained from learners, peers or supervisors regarding this educational practice, and how this has influenced your progression in medical education.

Qualitative feedback from students and peer educators have applauded this creative, enjoyable and interactive game. Student’s confidence in dermatology was assessed before and after a revision workshop and increased in all areas. Students agreed the game was interactive (100%), motivational (97%) and they learned through teamwork (91%). Excitement and enthusiasm from players, successful results in improved confidence and positive feedback from peer educators has supported our continued use and development of this educational tool.

Summarise the educational rationale for this project and how you used current evidence to develop your idea.

‘Serious games’ are recognised pedagogical tools which support learning. Gamification applied to sociocultural theory considers that students and peers learn by thinking, sharing and exploring knowledge within in a safe and fun environment. We have applied this and incorporated ‘VARK’ learning styles into our game to ensure accessibility for all learners, maintain variety. Topics are reinforced through repetition and gameplay. We have shown our game improved students’ confidence of dermatology and is an enjoyable learning experience.
Developing an out-of-hours teaching programme for medical students and an interdisciplinary teaching dementia crash course.
L Horne
Blackpool Victoria Hospitals NHS Foundation Trust

Describe the teaching or other educational activity for which you would like to be considered for this award. Be specific about your own involvement from conception to delivery.

I have created a yearlong out-of-hours teaching program for 4th year students named Bumble- Breakfast Undergraduate Medical Lectures. These are short, interactive and memorable morning teaching sessions with breakfast provided for students. The year of Bumble Lecture is to be concluded with Bumble EXTREME- a weekend revision day revisiting all of the topics covered prior to exams.

I have also organised and conducted an interdisciplinary (IDT) Dementia Crash Course for the past 3 years within my trust teaching all disciplines of undergraduates about excellent dementia care. The course includes the Alzheimer’s society Dementia Friends initiative in addition to covered categorisation and pharmacological options in dementia. There is also an opportunity for attends to share their experiences.

Explain why this activity is particularly relevant to trainees or your clinical area and its relevance to the wider educational community.

The Bumble programme has significantly improved student attendance, quality and satisfaction with the trust’s undergraduate out-of-hours teaching. It has also provided a supportive environment for trainees to express any examination anxieties or personal concerns. Trainee educators have been supported in their teaching techniques and given opportunities to practice such techniques.

The Dementia Crash Course allows students of all disciplines to learn with and from each other. This offers crucial opportunities to develop MDT working skills. A reduction in the stigma surrounding dementia and improved communication about dementia and with patients and their relatives. Feedback from the course has formulated evidence to demonstrate a demand for more IDT within the trust.

Summarise any feedback you have gained from learners, peers or supervisors regarding this educational practice, and how this has influenced your progression in medical education.

I have received a trust-based award for my contribution to MedEd & multiple commendations from students for my teaching. Significant improvement in attendance at teaching. With my relentless enthusiasm, I have encouraged the trust to offer its first teaching fellowship - I start in August! Outstanding feedback from students regarding teaching content and techniques. Demand for further IDT.

HEAT inspiring trainee nomination from medical education manager.

Summarise the educational rationale for this project and how you used current evidence to develop your idea.

In previous years the out-of-ours teaching received poor feedback- content and enthusiasm were lacking and attendance was poor. Timing of teaching meant some students struggle to make it. The programme needed redesigning and restructuring. The delivery style needed modifying. Supported opportunities for trainees to gain teaching experience were also needed.

Identified lack of IDT within our trust. GMC requirement for good MDT work yet minimal undergraduate interdisciplinary learning opportunities for HCP. (General Medical Council. Ethical Guidance for Doctors: Working with colleagues. 2018.)

Thursday 4th July 4.35-6.05pm Dochart 1
TASME TIE Prize Finalist 2019

PsychEDUp’: a seven-week multidisciplinary volunteer-led evening course for third year MBBS students.
S Butler, R Keynejad
South London and Maudsley NHS Foundation Trust

Describe the teaching or other educational activity for which you would like to be considered for this award. Be specific about your own involvement from conception to delivery.
We co-produced the curriculum of a seven-week volunteer-led evening course for third year MBBS students: ‘PsychEDUp’. We were competitively-awarded a £10,000 Health Innovation Network South London small grant. We convened a team of medical students, trainee psychiatrists, actors and service user representatives to reflect on the ‘hidden curriculum’. The team agreed seven themes and sub-groups collaborated on teaching content for each week’s theme. Each devised one large-group teaching (LGT) session and four thematic simulated patient role play cases. We share PsychEDUp content beyond the classroom through pre-session Twitter discussions (@PsychSL), promoting wider engagement and discussion with the general public. This developed into a podcast mirroring the course structure.

Explain why this activity is particularly relevant to trainees or your clinical area and its relevance to the wider educational community
In psychiatry more than any other specialty, significant barriers exist between patient or service user activism and clinical provision. Despite a flourishing mental health voluntary sector, the nature of compulsory detention and legal powers applied in psychiatry can limit the development of meaningful service user-staff collaborations. Multidisciplinary coproduction approaches which integrate the perspectives of diverse stakeholders present unique opportunities to break down barriers between clinicians, students and service users, as well as inverting power structures. The increasing interdisciplinarity of NHS care also makes meaningful multidisciplinary team-working an indispensable skill for future doctors.

Summarise any feedback you have gained from learners, peers or supervisors regarding this educational practice, and how this has influenced your progression in medical education.
PsychEDUp’s iterative design means that feedback is central to its delivery and development. We obtained approval to conduct mixed-methods evaluation research from KCL’s Research Ethics Committee (Ref:LRS-17/18-5254). On the Human Factors Skills for Healthcare Instrument (Reedy et al. 2017), learners improved significantly in their human factors skills self-efficacy, post-PsychEDUp (Wilcoxon signed rank test: p=0.0005) and self-rated preparedness for OSCE (p=0.0006). Our thematic analysis of qualitative responses highlighted the benefits of low-fidelity simulation.

Summarise the educational rationale for this project and how you used current evidence to develop your idea
The considerable health inequalities faced by people with mental health problems can, in part, be tackled by delivering education interventions to health-care staff (Lavelle et al., 2017).
Using a constructivist approach (Bruner, 1966) our LGT creates a scaffold on which the learner can build skills during simulation. Effective learning is more likely when practice is paired with debrief (McGaghie et al., 2010). High quality debriefing goes beyond feedback, fostering bi-directional discussion and reflection (Cheng et al., 2014). PsychEDUp seeks to address the hidden curriculum by delivering specific content, through the culture, role-modelling and making explicit the tension between reality and idealized notions learnt at medical school (Gaufberg et al,2010).

Thursday 4th July 4.35-6.05pm Dochart 1
A cost-effective and high-quality technological solution to teaching ophthalmology to medical students in the clinical setting.
H Monla-Haidar
Cardiff University School of Optometry and Vision Sciences

Describe the teaching or other educational activity for which you would like to be considered for this award. Be specific about your own involvement from conception to delivery.

The main aim of this project is to implement the use of cost-effective and high-quality visual recording technology in undergraduate teaching. To create a fully comprehensive visual recording slit-lamp accessory, we used a modified version of GoPro Camera which has a major advantage of recording high resolution up to 4k MP4 video, 12MP JPG photo recording. We assessed the applicability and implemented this idea in ophthalmology undergraduate teaching to enable students to easily observe slit lamp examination and facilitate the supervision of students. I was the main leader for this project; my role started from ordering the pieces into building up and testing the whole equipment.

Explain why this activity is particularly relevant to trainees or your clinical area and its relevance to the wider educational community.

The lack of convenient and affordable high-resolution visual recording accessories hinders training of ophthalmology medical students. Prior use of visual recording devices was limited by price and poor-quality images.

While the tutor examines the patient on slit-lamp, performs intra-ocular pressure check and perform procedures in clinic, the students observe this on an iPad device connected to the GoPro camera that is fitted on the slit-lamp. This enabled real time, high quality image and video streaming, with an option to pause, recall or edit the image by finger drawing. The tutor is also able to assess and assist students while using the slit-lamp to proper examination of the targeted part of the eye.

Summarise any feedback you have gained from learners, peers or supervisors regarding this educational practice, and how this has influenced your progression in medical education.

We received positive students and colleges feedback. In summary, this idea enables students to easily observe slit lamp examination, learn about specific pathologies, overcome the difficulty of using the slit-lamp. Also, they enjoyed the quality of the image and the ability to obtain better explanation on an iPad transferred image. Colleagues feedback focused how more efficient this idea was to facilitate the supervision of students and to teach the pathologies more effectively.

Summarise the educational rationale for this project and how you used current evidence to develop your idea.

Because of the adequate training is required to perform a precise examination and to illustrate pathologies. The lack of convenient and affordable high-resolution visual recording accessories hinders training of ophthalmology medical students. The project provides number of advantages as it significantly improved the quality of undergraduate ophthalmology teaching overcoming the students’ difficulty using the slit-lamp. It is a cost-effective option compared with other slit-lamp visual recording devices.

Thursday 4th July 4.35-6.05pm Dochart 1
Medical Education Travelling Fellowship Recipient 2017


M Lazarus
Monash University, Australia

Background:
Within authentic clinical experiences, ambiguities exist along the patient care spectrum, but the impact of doctors’ tolerance of ambiguity (ToA) is poorly understood. There is some evidence that doctors with low ToA may have decreased well-being and/or negatively impacts patient care. A review of the literature suggests there may be some questions about the validity and reliability of existing ToA scales, which serve to quantify an individuals’ tolerance to uncertain stimuli, despite many users assuming scale validity. Additionally, cultures outside the USA are under-represented in validity testing. Given the important role ToA may play in healthcare contexts, this research sought to (1) study the dimensionality and stability of existing healthcare-specific ToA scales and (2), determine whether their validity transfers to the context of undergraduate Australian medical students in an effort to identify methods for altering ToA through educational initiatives.

Methodology:
A multiphase, emergent approach was taken wherein Cronbach’s alpha, confirmatory factor analysis (CFA), and exploratory factor analysis (EFA) were used to evaluate the reliability, construct validity, and stability of these healthcare-related ToA scales.

Results:
A total of 333 preclinical medical students completed ambiguity inventories across the study phases. CFA and EFA of participant scores (n=102) revealed these scales were multidimensional, had weak construct validity, and were highly unstable across multiple distributions. These results suggests the latent constructs measured by the optimized ToA inventory are highly unstable making the dependability of these scores suspect.

Discussion:
The dominating healthcare-ToA models, and the understanding of the ToA construct itself, warrant re-evaluation in light of current findings. ToA appears to be a complex, multi-faceted construct, which may be culturally dependent. Our findings, coupled with a review of others’ ToA scale outcomes, suggest that future studies need to rigorously explore the conceptual underpinnings of ToA to better inform its measurement. This study is one of the first to explore ToA scale validity outside of North America or the United Kingdom, and illustrates that the validity and stability of ToA scales is highly questionable. Thus, the investigators recommend suspending attempts to draw meaningful conclusions from existing healthcare ToA scales until the construct is more clearly understood.

Thursday 4th July 3-3.20pm Alsh 1
As someone relatively new to medical education, it remains a particular joy of mine that medical education spans so many barriers; geographical, societal and language. However, the fundamentals of what medical education is all about, namely providing the best possible care for patients through evidence based education of healthcare professionals, is the same throughout the world.

As the recipient of the Medical Education Travelling Fellowship I was lucky enough to have the opportunity to visit Prof. Lynn Monrouxe at the Chang Gung Memorial Hospital Medical Education Research Centre in Taipei, Taiwan. This presentation will explore my experiences of visiting Lynn and her team, and discuss the collaborative research taking place examining professional identity formation amongst medical students who have undergone remediation.

In particular, the presentation will compare and contrast approaches to remediation, what it means to have an identity as a medical student and a doctor and the ways in which different approaches to healthcare and medical education can impact on the evolving identities of medical students.

The presentation will also explore some of the early findings of our research projects and the benefits from international collaboration on medical education research.

Thursday 4 July, Alsh 1 2.20-2.40pm
The Clinical Teacher Travelling Fellowship 2017 Recipient
A Hall
Great Ormond Street Hospital

Boston Children’s Hospital and Harvard Medical School Simulation Team

Following the receipt of the TCT Travelling Fellowship in 2017 I joined Boston Children’s Hospital Simulation team in June 2018 to gain experience in the integration of simulation methodology and ethos within the clinical environment. My dual areas of focus were on evaluation of ‘in situ’ otolaryngology simulation delivered and developing 3D-printing techniques for case rehearsal. This presentation outlines my experience and lessons learnt working in these two main areas.

1) Evaluation of ‘in situ’ multi-disciplinary otolaryngology simulation 2011-18

This outlines the nature of ‘in-situ’ simulation and the important principles of team science and human factors in delivering clinical care, forty-seven recorded scenarios were analysed. We performed communication analysis of directed and non-directed communication within teams handling simulated emergency scenarios. In comparing the linguistic properties of attending surgeons with senior fellows, there were a number of statistically significant differences. The attending group utilized double the number closed loop communications compared to the ORL fellow group (2.19 (p-value .00046). The mean number of directed and non-directed task-based requests to the team was also higher within the attending group. In addition we focus on the delivery of the WHO checklist within our simulation experience according to a validated WHO-BARS scoring system which shows improvement of checklist use over time. Lastly we outline pilot data using acoustic analysis of surgeons’ voices to assess stress during Paediatric Otolaryngology simulation scenarios, here there was a statistically significant increase in the mean fundamental frequency of speech in the ORL Fellow (lead surgeon) participating in paediatric ORL simulation between ‘stress’ and non-stress environments. This change was not found within the attendings participating.

2) Developing 3D-printing techniques for surgical case rehearsal and training

Here, I outline the Boston approach to develop 3D printed models for case rehearsal and surgical training using my experience of a complex cochlear implant case and pulmonary haemorrhage simulator.

In conclusion, I am hugely indebted to the receipt of the award that allowed me to gain a greater understanding of ‘in-situ’ simulation and the learning that can evolve from this approach. Since my return to the UK, I have run three sessions at Great Ormond Street Hospital applying these principles and will continue to draw upon my experience throughout my future career in medical education.

Thursday 4th July 2.40-3.00pm Alsh 1
Leadership Development Group New Leaders Award Winner 2019
@BecomingaDr and the National Health Careers Conference
R Sethi, Clinical Entrepreneur Fellow, NHS England

We are delighted to have been recognised by the ASME New Leaders Award 2019 for our work. ‘Becoming A Doctor’ (@BecomingaDr – www.becomingadr.org) was established to provide support for aspiring medics and health professionals. A key aim of our work is to ensure that barriers to access opportunities and resources are eliminated, and that there is no cost to the aspiring health professional.

We are a diverse volunteer team of healthcare professionals, students and advisors. We deliver outreach activities working with organisations including schools, charities, universities, local authorities and NHS bodies. The team have worked with numerous organisations to deliver interactive sessions led by medical students and doctors. We have also been invited to deliver sessions as part of work experience placements at NHS trusts. There is extensive social media engagement and a wealth of information on our website. Through supporting aspiring medical students we empower current medical students, trainees and wider healthcare professionals to get involved with creating resources, acting as ambassadors, mentoring and supporting our wider work.

In October 2017, we hosted our first National Health Careers Conference (@HealthCareersCo – www.healthcareers.live) in Manchester which showcased a range of careers in medicine and health. The event included keynotes, clinical skills zones, 30+ workshops and exhibitions from over 20 major organisations including the General Medical Council, Royal Colleges, Medical Schools Council, the British Medical Journal, JASME as well as universities such as Cambridge, Imperial College London, UCL, Cardiff, Swansea, Bristol and Bradford.

The impact of the event was high with over 1000 delegates (89% of school/college attendees were from the state sector) from across the UK, with some delegates attending from Europe too. We also received wide coverage through traditional channels such as BBC News, as well as a substantial social media impact.

The next National Health Careers Conference will take place on 28th September 2019 in Manchester. It will continue to be free for students to register and there are new additions including a ‘health careers live’ keynote stage, collaboration with patients as well as new research, digital and innovation streams. This will be complemented by sessions for current medical students, trainees, GPs, Consultants and wider health professionals.

The team welcome individuals and organisations to partner with us to widen participation and inspire future healthcare heroes. Please e-mail outreach@becomingadr.org / info@healthcareers.live to get involved or find out more.

Wednesday 3rd July 5.10-5.30pm Alsh 1
Use of empathy maps combined with real patient encounters in medical education: student and patient experiences

P Cairns¹, I Pinker¹, E Watson¹, A Ward², R Hsu², A Laidlaw¹
¹ School of Medicine, University of St Andrews, ² School of Medicine, University of Leicester

Background and Purpose
Compassion and empathy are core concepts in health care interactions but there is increasing concern that not enough compassion and empathy is experienced by healthcare professionals¹. These concepts are cornerstones of patient centred care, generally viewed as the most effective doctor – patient relationship style for improving patient health outcomes², ³, therefore understanding how to developing care and compassion for patients in medical students is important for medical education⁴. A recent systematic review of RCT interventions to promote empathy within health professionals⁵ revealed that the majority were targeted at changing clinical communication behaviour as a measurable expression of empathy, only one study examined a change in empathetic attitude, and none linked a change in empathy to participants views regarding patient centred care⁵.

Empathy maps were initially developed within service industries to understand customer perspectives⁶, however they may provide a useful tool for assisting medical students to focus on a patients perspective. The Schools of Medicine at the Universities of St Andrews and Leicester introduced an empathy mapping exercise as a way of improving empathy and compassion within their first year medical students. At one school a single interaction between a patient and a small group of students was conducted face to face, after which an empathy mapping exercise was conducted. At the other school a longitudinal relationship was established between a small group of students and a real patient following one face to face encounter and many online discussions prior to the empathy mapping exercise.

This study aimed to explore the impact of the empathy mapping exercises on both patient and medical student perceptions surrounding empathy and compassion and to examine whether the impact was influenced by the predominant media by which students and patients interacted.

Methodology
Up to 13 patients and 13 student participants will be recruited at each site (St Andrews and Leicester). Semi-structured interviews with the real patients involved in the encounters with medical students following the sessions focussed on motivation to take part, their expectations and experiences in using the empathy maps, whether they perceived they experienced empathy or compassion from the students and their ideas for developing the sessions further.

A series of three semi-structured interviews with students taking part in the empathy map sessions, one prior to the sessions (T1), one shortly afterwards (T2) and one three months later (T3) focussed on their expectations and experiences of the empathy mapping exercise, their views towards the doctor-patient relationship and their views towards showing empathy or compassion within a clinical interaction. The interviews also seek student views with regards to developing the empathy mapping teaching session.

Interviews were audio recorded, transcribed and analysed using thematic analysis.

Results and discussion
The empathy mapping exercise occurs during the Autumn semester at St Andrews and during the Spring semester at Leicester. This has meant to date data collection has started at St Andrews but is yet to commence at Leicester. At St Andrews 16 interviews have been conducted, 4 students T1, and additional 3 students were recruited at T2, meaning 7 student interviews occurred at T2. We have also completed 5 patient interviews. Very preliminary analysis suggests the empathy maps exercise helped create single narrative amongst group of students as to how the interview went, and who the patient was and what their experiences were. Participants also reported the empathy map enhanced their ability to step into the patients’ shoes.

Results from the patients noted some confusion with regards completing the empathy maps for themselves and concern about filling them in ‘correctly’.
Results so far highlight the need for possible modification requirements for the empathy maps patients complete and clearer guidance on completing them. However initial student responses are very positive, highlighting a mechanism in which empathy skills could be enhanced.

References

Wednesday 3rd July 4.10-4.30pm Alsh 1
The British Society for Rheumatology / ASME Joint Educational Research Prize 2018

Training the next generation of clinical rheumatology researchers: evaluation of a graduate Allied Health Professional and Nurse internship programme

A Patience, D Wright, C Bowen, M Fry, J Adams
The AHP and Nursing Internship Programme Team, University of Southampton

Background
Building research capacity is an essential part of sustaining evidence based practice in nursing and allied health professions working within rheumatology. Whilst medical and dental professions have a strong tradition of research capacity building, the situation for Allied Health Professionals and Nursing in the UK is less developed. This presentation reports on the interim findings of an evaluation of a collaborative internship programme across five UK universities from 2015-18. The internship included an eight-week programme of structured training workshops and research project delivery, and ongoing mentoring by experienced researchers. Sixteen interns were recruited from across the UK, including physiotherapists (7), podiatrists (5), occupational therapists (2) and nurses (2).

Methods
The evaluation employed mixed methods including: analysis of research metrics, an annual evaluation questionnaire sent to all 16 interns, and qualitative email interviews (8 interns, 9 mentors) conducted at the end of the internship programme. Interpretive phenomenological analysis of transcripts was used to identify recurring themes.

Results
Early quantitative outcomes from internship projects include three peer-reviewed publications, and 13 conference abstract presentations. Interns reported positive changes in their perceptions of research and rheumatology, including a realisation that clinical academic pathways were possible. Skills attained of most value to interns were technical research (e.g. qualitative research), research process (e.g. securing funding), rheumatology knowledge (e.g. fatigue), and general skills (e.g. communication). Two domains of impact were identified. First, the programme directly impacted on research careers with four interns securing clinical academic positions and most others reporting commitment to pursuing active research in the near future. Second, the internship had an impact on practice for those entering full-time clinical careers. Interns spoke of their ability to be ‘critically aware’, seeking an evidence base for clinical decisions. Many spoke of a new confidence in expressing opinions with clinical colleagues. Others spoke of the need for patient-centred care, learned from the Patient and Public Involvement training provided by the internship. Similarly, interns reported an increased awareness of the wider relevance of rheumatology, which influenced their subsequent clinical practice. One challenge for the internship programme identified by mentors was the difficulty in attracting interns from all Allied Health Professionals and Nursing backgrounds (notably nurses). In addition, several interns entering full-time clinical roles reported difficulties in continuing research in environments that devalued such activity.

Conclusion
The collaborative internship programme has been successful in supporting research capacity building by introducing newly qualified allied health professionals and nurses to research and rheumatology. This has generated tangible benefits through research outputs, clinical academic careers and influencing clinical practice. The programme serves as a model for research capacity building for other health conditions and professions.

Thursday 4th July 2-2.20pm Alsh 1
Over the past 30 years the UK National Health Service has been shaped by its people. Whilst in its origins it took a paternalistic stance on healthcare delivery, there has been an increasing move towards a more ‘patient-centred’ approach. It is unsurprising therefore that this shift in patient-centredness has over spilled into the field of medical education.

Research in the adult literature has opined that adopting a patient-centred approach has a positive impact upon a person’s health and wellbeing. However, this benefit has not always directly translated when considering patients’ involvement in healthcare education. Whilst the purpose of involving patients in the instruction of learners is to provide some form of societal good, it has been argued that patients have predominantly acted as objects of education. Overcoming this objectification is key to promoting an educational environment that is mutually beneficial to the student and the patient.

Until now the focus on patient-centred involvement in education has been largely on the adult population. Children present their own unique qualities and challenges, both in delivering healthcare, educational instruction, and research performance. This work seeks to explore the complexities of educating and researching within the field of paediatrics. The overarching aim is to create a gaze shift whereby children’s experiences of medical education can be explored, with the hope that a new paradigm of child-centred learning can be created to foster children’s involvement in medical education that is mutually beneficial.

Poster Board: F1
Abstracts presented in oral Parallel Sessions
(by theme)
Direct Ophthalmoscopy Learning Unveiled
R Chen, A Ross, W Amoaku, D Said, H Dua, P Agrawal
Undergraduate Medical Education Department, University of Nottingham

Background:
Direct ophthalmoscopy learning is an integral part of medical student and foundation year doctor competencies. [1] It can help in diagnosis of some sinister and important pathology. However, undergraduate medical students find it challenging over the two weeks’ period of time allocated for ophthalmology teaching. Moreover, several studies showed that trainees lack the confidence in performing this skill. [2,3] As such, we developed a new simple technique to facilitate learning and raise students’ self-confidence.

Methodology:
To simply ophthalmoscopy technique, we broke down the skill into 5 different simple steps. The first step, the students were asked to close each eye alternatively for 30 seconds. In the second step, the students were asked to draw a 5 mm circle on their hand and maintain the light of the ophthalmoscope focused within this circle with the other eye closed. The third step, students were asked to read some written lines in their logbooks at 10 cm distance using the ophthalmoscope. The students were then asked to hold the ophthalmoscope at 30 cm distance and read the same lines again after focusing. The final fifth step, the students were given a printed fundus photograph with their names printed at different parts of the fundus, in different colours. Students’ names were distributed at disc, temporal arcades, nasal arcades and the macula. As the students examined different parts of the fundus, they were asked to report the colour in which their names appeared.

Results:
Forty students were enrolled. All students’ included reported, through anonymous online feedback, increased self-confidence using direct ophthalmoscope. After this 10 minute exercise, the students reported this technique as easy and enjoyable as well as an easy tool to learn ophthalmoscopy. It also encouraged the students to see more patients on their own.

Discussion:
This novel technique is simple, effective, low-cost and does not require any sophisticated instrument or simulators. It raises students’ self-confidence in direct ophthalmoscopy practice. We conclude from our results that this new technique should be adjuvant to the classic teaching of direct ophthalmoscope.

References:

Presentation Details: Thursday 4th July, 2.00-2.20pm, Alsh 2
Maybe I won't be a terrible doctor after all? Does the assistantship prepare medical students for clinical decision-making?
G Greenlees, I Sabroe
Royal Wolverhampton NHS Trust

Background:
The student assistantship, a placement in which a senior medical student “assisting a junior doctor and under supervision, undertakes most of the duties of an FY1 doctor” is a new addition to the undergraduate medical curriculum. Motivations for the assistantship are grounded in the long-held view that the transition from medical school to clinical practice represents a significant challenge for trainees. Whilst self-reported preparedness for some domains of practice has increased, FY1 doctors report feeling less prepared for clinical reasoning and formulating diagnoses1. Furthermore, it has been argued that current FY1 shadowing programmes, such as the assistantship, do not fully prepare undergraduates for complex decision-making2. This project therefore sought to assess whether a group of FY1 doctors working in South Yorkshire were provided with opportunities to develop decision-making skills or whether they have since acquired these entirely “in the deep end”.

Methodology:
Twelve Foundation Year 1 doctors in South Yorkshire participated in three focus groups held at the University of Sheffield medical school. A topic guide was used to facilitate discussion on prior experience of decision-making, the role and status of the assistantship student and the transition to clinical practice. A descriptive analysis of interview transcripts was conducted and identified emerging concepts and themes before refining these into overarching themes for which illustrative quotations were identified.

Results:
Key themes emerged from the focus groups: anxiety about starting work, dealing with uncertainty and barriers to an effective assistantship. Participants reported significant anxiety generated by “small” decisions such as chasing bloods or leading a ward round. Interestingly this was often perceived as more stressful than decisions about acutely unwell patients where seeking senior support was viewed as more acceptable in these situations. Generally, participants felt opportunities for practicing decision-making in the assistantship were limited. Identified barriers included low motivation of supervising FY1 trainees to involve them, hostility to students assuming FY1 roles and placements not matched to student’s first rotation.

Discussion:
It has identified that there are still significant barriers to making the assistantship a realistic and educational bridge to the responsibilities of Foundation Training. The results of this project can provide a basis for larger qualitative studies on the assistantship as well identifying several areas that medical schools should consider to further develop their assistantship programmes.

References:

Presentation Details: Thursday 4th July, 2.20-2.40pm, Alsh 2
The Use Of A Surgical Simulator To Develop Knee Arthroscopy Skills
C Kocialkowski, N Atwal
Southmead Hospital, Bristol

Background:
The use of simulators in surgical training is increasing. Primarily simulators have been used in laparoscopic skills training for general surgical trainees (1). New simulators have recently been developed to improve arthroscopic skills, particularly for the knee and shoulder. This is increasingly relevant, as modern pressures on training mean that surgical trainees are less likely to get as much exposure in the operating theatre as previously (2). Arthroscopic simulators have the potential to improve surgical training by allowing surgical trainees to develop their arthroscopic skills in a controlled manner with the ability to obtain objective feedback on their performance and progress through a range of different assessments. This in turn will mean they are more likely to effectively utilise their exposure in the operating room.

Methodology:
We set up a knee arthroscopy educational day for junior surgical trainees to assess the effectiveness of surgical simulators in improving knee arthroscopy skills. This included lectures from an experienced faculty, as well as various practical training sessions, which included surgical simulators to specifically develop knee arthroscopy skills. Trainees had to work through a range of different assessments which included diagnostic arthroscopy, triangulation skills, foreign body retrieval and meniscal resection. After each assessment they were given an analysis of their performance by the simulator, based on the time taken to complete the assessment and the efficiency of their movements. The safety of the surgery was also calculated by assessing any iatrogenic damage that incurred during the procedure. The trainees then completed the same assessments a second time, later in the day, to determine whether they had made any improvement in their arthroscopic skills. Scores were calculated by the simulator from 0 to 1, with 1 being a perfect performance.

Results:
There was a statistically significant improvement in the overall arthroscopic performance by trainees over the period of the education day. Overall simulator scores improved from a mean 0.58 to 0.80 (p=0.002). There was also a significant improvement when time to completion of the assessment was analysed alone, with a mean score improvement from 0.46 to 0.79 (p=0.005). There were also non-significant improvements obtained in both safety and efficacy of arthroscopy. Feedback obtained from the surgical trainees after the course indicated that they particularly enjoyed the use of simulators to train arthroscopic skills and they felt much more confident with performing knee arthroscopy in the operating room after having improved their skills on the simulator.

Discussion:
The use of a surgical simulator to develop knee arthroscopic skills is an effective way of delivering surgical training. The simulator helps surgical trainees to build up their arthroscopic skills in a controlled environment and provides them with accurate objective analysis of their performance so that they can improve on different elements of knee arthroscopy. Surgical trainees seem to particularly enjoy this type of operative skills training and it is likely that simulators could be employed in future to train a range of different arthroscopic skills, and include more complex procedures.

References:

Presentation Details: Thursday 4th July, 2.40-3.00pm, Alsh 2
Clinical Skills

Transforming intimate examination of males using Clinical Teaching Associates
A Demetri, F Charlton, J Taylor, K Jones
University of Bristol

Background:
Clinical teaching associates are lay people who are trained to teach medical students consultation and intimate examination skills using their own bodies (1). The use of female clinical teaching associates to teach medical students intimate examinations has been well established over the last decade, with a number of UK medical schools using CTAs (2). Less well established in the UK, however, is the use of male CTAs to teach digital rectal (DRE) & genital examinations to medical students, with the method of teaching being far more widespread in other countries (3). Studies outside of the UK have argued that using CTAs is a more effective method of teaching intimate male examinations than traditional methods using models (4). Additionally, using lay people to teach these examinations is in keeping with the desired theme of the GMC to involve patients in medical education (5). Over the last 3 years, 2016-2019, the Swindon Academy, University of Bristol, has used male CTAs to train medical students how to effectively carry out the consultation and intimate examination. Data has been collected to assess its effectiveness, with comparison to traditional teaching methods. Additionally, attitudes from the CTAs have been recorded in order to see the impact they believe having patients involved in such teaching could have on future health care.

Methodology:
Data regarding the use of male CTAs has been collected prospectively from September 2016 to the current date. Students attend in groups of 2 or 3 for sessions led by CTAs. The session begins with a role play in which students practice explaining the examination and gaining consent. After this, the students performed intimate examinations of the CTAs, receiving feedback during and after they had finished this. Once they had completed the session, students were asked to rate their pre and post session knowledge and confidence (scored using a Likert scale) in a number of aspects relating to the consultation and intimate examination. Students were also asked to compare this to traditional teaching in the area. Finally, students were asked to give qualitative feedback on the session.

Results:
69 students have attended the male CTA session so far. From the data collected, all students’ self-assessed confidence in all areas of intimate examination improved following the session. Furthermore, feedback indicates that students consider traditional methods to be inferior to CTA teaching. Data collection is on-going and will analysed in full when the cohort of 2018/2019 have completed the training in June 2019. Qualitative feedback has said: ‘Thank you so much for teaching us, an invaluable experience that should be offered to all medical students’ Feedback collected from the CTAs was also very positive, for example: ‘Being able to teach students lets us know what is normal. It also empowers the patients.’

Discussion:
Teaching medical students how to do intimate examinations is challenging. Nevertheless, data collected demonstrates that the use of CTAs has a positive impact on students’ learning of how to perform intimate examinations, and that students value CTA teaching, more than traditional teaching. Furthermore, from talking to the CTAs themselves, it appears that lay people/patients being involved in teaching in this way has a positive impact in terms of empowering patients in a difficult examination. We hope the positive finding of this study will lead to more UK medical schools adopting male CTA teaching as part of the curriculum.

References:

Presentation Details: Thursday 4th July, 3.00-3.20pm, Alsh 2
Doctors as Storytellers - Promoting medical student confidence, body language and storytelling skills through performance training for oral case presentation

H Fuller, K Stevenson
North Bristol Undergraduate Academy

Background:
Despite the patient oral case presentation (OCP) being the principal mode of communication between doctors educational interventions for the teaching of OCP skills are virtually non-existent1. Students are typically expected to learn case presentation skills during their clinical years, with a recognisable lack of teaching on its’ underlying structure, rhetorical and linguistic principles2. Performance training has been proven to improve students’ ability to case present3. Doctors as Storytellers aimed to: 1. Inform medical students of the role and structure of the oral case presentation. 2. Train them in performance training techniques to give them a means to use semantic qualifiers, language and storytelling skills for case presentation. 3. Give students constructive and well-timed feedback on their presentations. 4. Create a model to teach oral case presentation effectively.

Methodology:
Doctors as Storytellers was funded by the North Bristol Academy and was introduced into the Bristol University Medical Student Second Years’ ‘Learning in the Clinical Environment’ programme between May-July 2018. Forty-nine Second Year Medical Students attended an introductory session on the structure, format and style of the oral case presentation. They then attended two 1.5-hour sessions co-led by a clinician and actor to develop their confidence, body language and storytelling skills. During the four week placement the students delivered oral case presentations before and after attending the educational intervention, these case presentations were marked by clinical teaching fellows not involved in the delivery of the teaching program, using a newly developed and validated mark scheme. The students were also surveyed on their experiences of the project.

Results:
Oral case presentation scores Students scoring a ‘Good Pass’ (scoring options = Fail, Borderline, Clear Pass, Good Pass, Excellent) increased following the education intervention in the following parameters:

- ‘Length of presentation’ increased by 12.5% (p=0.047)
- ‘Confidence’ by 20.68% (p=0.02)
- ‘Overall Organisation’ by 21.64% (p=0.0187)
- ‘Storytelling skills’ by 25.48% (p=0.0024)
- ‘Engagement with listener’ 25.96% (p=0.0024)
- ‘Speaking style’ by 30.45% (p=0.0015) Student experience of the teaching
- 78% of students agreed or strongly agreed that Doctors as Storytellers increased their confidence in presenting a patient’s case.
- 82% of students agreed or strongly agreed that Doctors as Storytellers furthered their understanding of the storytelling skills required to orally case present.
- 89% of students agreed or strongly agreed that Doctors as Storytellers furthered their understanding of the communication skills required to orally case present.
- Only 59% agreed or strongly agreed that the feedback was appropriately delivered, and 67% agreed or strongly agreed given feedback was useful.

Discussion:
- Performance training can significantly improve Second Year Medical Students’ duration, confidence, overall organisation, speaking style, engagement with their listeners and their storytelling skills for oral case presentation.
- Medical students enjoy performance training and see its’ value in practice.
- Feedback needs to continue to be appropriately delivered and useful in order to help students to learn.

References:
Makaton in Medicine - Equipping Medical Students with an Additional Means of Communication
V Westcott, P Nalwaya, A Wallace, W Brown, P Rusby, J Dovey, J Rees
South Bristol Academy, University of Bristol

Background:
Makaton is the UK’s leading language programme for adults and children with learning and communication difficulties (1). Signs are based on British Sign Language and are used to stimulate language development and encourage communication (2). The General Medical Council highlights communication as one of the key duties of a doctor (3). As medical professionals, we are encouraged to facilitate different communication methods (4) with several guidelines advocating the use of Makaton specifically (5, 6, 7). With this in mind, we wanted to investigate whether it would be feasible and appropriate for medical students to learn some core Makaton signs during their medical training and whether these signs are likely to be used in practice to improve communication.

Methodology:
We offered a basic Makaton session to all 33 students on paediatric placement at South Bristol Academy. 13 students accepted the offer, 2 of whom were unable to attend due to other commitments. An hour long session was provided by a trained Makaton tutor, beginning with a task in which students were asked to describe an image to a partner without the use of speech. The session then focused on 40 key signs which had been chosen to facilitate basic communication in a medical setting. Throughout the session, the tutor observed the students to ensure that their signing was correct. The students were asked to complete a questionnaire before and immediately after the session. They will be asked to complete an additional questionnaire in 8 weeks.

Results:
11 students completed the pre-session questionnaire. 8/11 had not heard of Makaton before the session. Of the 3 students who had heard of Makaton, 1 did not know any signs and 2 students knew 3-5 signs. The most common motivator for students to attend the session was to improve communication with patients. 10 students completed the immediate post-session questionnaire. 10/10 students responded that they were comfortable in performing all 40 signs. All students also felt that an appropriate number of signs were covered during the hour-long session and that the choice of vocabulary was suitable. All students either agreed (6/10) or strongly agreed (4/10) that they would recommend the session to other medical students. 3/10 agreed and 7/10 strongly agreed that the session increased awareness of the challenges faced for those with communication difficulties. At 8 weeks, we will assess if students have retained the signs, if they have managed to use the signs during their clinical placements and if they feel that their behaviour has changed as a result of taking part in the session. These results will be available for the conference.

Discussion:
Our early results suggest that it is possible to equip medical students with a basic Makaton vocabulary during a 1-hour teaching session, whilst improving awareness of communication difficulties. We are interested to review responses at 8 weeks to determine whether this learning can be sustained and whether students are able to use the signs they have learned to improve the patient experience. At present, there seems to be a discrepancy between the communication options that we would like to offer to patients and those that we are able to provide. By delivering future sessions to larger cohorts of different healthcare professionals, we hope to further investigate whether such sessions could bridge this gap.

References:

Presentation Details: Wednesday 3rd July, 3.50-4.10pm, Boisdale 1
Teaching difficult communication skills through patient engagement: a novel approach
H Patel, I Hibell, M Beattie, B Chiva Giurca, N Mukundu Nagesh, M Saint, G Lau
University of Exeter Medical School

Background:
With 1 in 2 people developing cancer during their lifetime, healthcare professionals will inevitably be involved directly or indirectly in the care of cancer patients. (1) Although medical education has recently evolved to emphasise the biopsychosocial model, current exposure of medical students to patients with cancer remains inadequate, despite exposure correlating with preparedness for practice. (2) Our aim was to use a novel method of teaching difficult communications in cancer through patient engagement.

Methodology:
We set up a collaboration between the Exeter Medical Leadership and Management Society and FORCE Cancer Rehabilitation Centre to conduct structured interviews of cancer patients and their experiences of cancer. 15 medical students conducted 48 interviews that were one hour in duration. The first half of the interview focused on the patient’s narrative, whilst the second half was led by the medical students who asked follow-up questions. Student perspectives were obtained through structured reflections upon completion of all patient interviews. Student reflections were analysed to derive key themes to inform learning points using the Framework method analysis. (3)

Results:
Qualitative thematic analysis of student reflections revealed three distinct themes. 1. Knowing what to say; 2. Seeing the person in the patient; and 3. Understanding the consequences of poor communication.

Discussion:
The structured interviews and reflections allowed students to develop their communication skills, improve their history taking, and learn from the negative experiences patients have had. Student reflections demonstrated a difficulty in not knowing what to say. However, through interviewing patients, students developed an appreciation for silence. Furthermore, students developed a greater awareness of the importance of the social history and the effects of spirituality, culture, and alternative healthcare practices on health outcomes. (4) Lastly, students were able to learn from the negative experiences of patients and the impact of poor communication skills in breaking bad news, to inform their practice as future doctors. Patient volunteers involved in the initiative described the experience as being enjoyable, rewarding, and therapeutic. Similar initiatives could be implemented nationwide to build a collaborative culture where students learn with patients, for patients.

References:

Presentation Details: Wednesday 3rd July, 4.10-4.30pm, Boisdale 1
The PHONE Checklist - A Tool for Training and Improving Telephone Communication Between Doctors
F Guest, L Merker, R Patel, I White, I Hunter
Musgrove Park Hospital, Taunton

Background:
It is well-established that poor telephone communication between doctors leads to risks in patient care (1). Conversely, communication and human factor errors have been markedly reduced in the operating theatre setting with the introduction of the WHO theatre checklist(2). Whilst most doctors now receive communication skills education, doctor to doctor telephone communication is not standardised and the ‘SBAR’ tool is not specific enough to consistently improve quality(3).

This study aimed to
1. Improve education in doctor to doctor telephone communication
2. Identify and analyse barriers to effective communication
3. Devise a checklist using the WHO theatre checklist methodology to minimise error.

Methodology:
Research into barriers to effective telephone communication between doctors was undertaken by a focus group of doctors of different grades. These barriers were tested using a questionnaire distributed to newly qualified through to most senior doctors. The validated communication barriers were used to devise a communication checklist. The checklist underwent a revision and refinement process using trial in the clinical setting with plan, do, study, act (PDSA) cycle analysis.

Results:
Barriers identified from the focus group and questionnaire fell into three categories: preparation, caller anxiety and documentation. 8% of callers felt that they ‘always’ had enough time to prepare before making a call (77% mostly, 15% sometimes). 5% of call recipients felt that there was ‘always’ sufficient information to give appropriate advice (60% mostly, 30% sometimes, 5% rarely). 54% of callers rarely (50%) or never (4%) felt confident to challenge a senior about their plan. However, only 12% ‘sometimes’ felt belittled (69% rarely, 19% never) and 31% ‘sometimes’ found making a call intimidating (58% rarely, 12% never). 58% had ‘never’ been bullied (rarely 35%, sometimes 8%). No call recipients felt that documentation of a call was ‘always’ accurate (20% mostly, 45% sometimes, 25% rarely, 10% never). 73% of callers and 90% of call recipients agreed that telephone communication could be improved. A checklist was devised in order to standardise telephone communication and address the barriers identified in the questionnaire. Four PDSA cycles were undertaken in different acute clinical settings. Key changes undertaken in these cycles included: Reducing document length Removing time-consuming hand-written components and replacing these with tick boxes Creating a memorable ‘PHONE’ acronym to guide user implementation Increasing space devoted to the hand-written agreement between both parties on conclusion of a telephone referral Aligning the introduction of the checklist with an educational session to explain its purpose. Following PDSA refinement, the checklist was formally trialled in the hospital emergency department where it received universally positive feedback from junior doctors and most senior doctors. However, some senior doctors voiced reservations about introducing another administrative task. There has, however, been a perceived reduction in communication error with the checklist introduction.

Discussion:
Preparation, caller anxiety and documentation are key areas identified as barriers to effective telephone communication between doctors. The ‘PHONE checklist’ is an effective tool in postgraduate and undergraduate education. In line with the WHO checklist methodology, the ‘PHONE’ checklist has standardised telephone referrals between doctors. Junior doctors’ feedback indicates substantially increased confidence in telephoning more senior doctors. Further education will be required to effect a culture change amongst more senior doctors. However, this mimics initial resistance to WHO checklist implementation which has now been acknowledged to reduce patient risk.

References:

Presentation Details: Wednesday 3rd July, 4.30-4.50pm, Boisdale 1
Considerations from over a decade of studies into mentor preparation and activity: the unexpected consequence of changed medical mind-sets.

A Steven, N Redfern
Northumbria University

Background:
Mentoring is popular across medicine, however, there has been limited focus on doctors who have attended mentor training, their subsequent employment of mentoring skills and abilities. This presentation will explore a cross cutting theme ‘changed medical mind-set’, emerging from a series of UK studies into mentor preparation and activity undertaken by the author over more than a decade. The studies span a range of specialties including Anaesthesia, General Practice, Surgery, Obstetrics and gynaecology, Paediatrics and Psychiatry. Whilst many types of mentoring approach exist, those used in the initiatives studied draw on the Egan skilled helper model and do not rest on notions of a senior-protégé relationship.

Methodology:
The studies undertaken between 2003-20017 included qualitative and mixed methods explorations and evaluations of: the perceived benefits of involvement in mentoring (2004), mentoring schemes (2008)1, mentor development initiatives and courses (2015), and a British Medical Association funded study into the relationships between mentoring activities and Drs Health and Wellbeing (2018)2. The studies draw on social constructionism3 and are based in the view that, like education and learning, mentoring is a set of complex social processes which is individual, socially negotiated and context bound. The methodologies employed draw on grounded theory, illuminative evaluation and latterly principles and elements of realistic evaluation4.

Results:
Although not the specific focus of these studies, it was noticed that participants have consistently and spontaneously reported changes in their way of thinking, confirmed by retrospective analysis of the studies. Some participants expressed learning and using the skills, techniques and frameworks as 'life changing' and profound; some as a moment of pause and reflection, a re-learning of forgotten skills; and others as prompting reflection on a medical culture (and discourse) which perpetuates a certain way of thinking and being - often 'diagnostic and management' focused.

Discussion:
Mentoring may be one way of helping doctors at all stages of their career cope with difficulties, transitions and related expectations. However the consequences of learning specific frameworks and skills used in 'empowerment focused' mentoring, or engaging in such a mentoring approach have not been explored in any depth - rather the impact of mentoring is usually reported in terms of outcomes for the mentees involved. This 'longitudinal' consideration of studies undertaken between 2003-20017 into mentoring schemes and mentor preparation, suggests that learning and using the framework, skills and techniques involved in Egan style mentoring (empowerment focused mentoring) can have an unexpected transformational impact on some doctors. It appears there is a common and recurring theme of a changed 'medical mind-set', perceived to have a positive impact on team working, medical culture, doctors health and wellbeing and patient care - and which pervades aspects of both professional and personal life.

References:

Presentation Details: Wednesday 3rd July, 4.50-5.10pm, Boisdale 1
Transforming reflection for CPD and appraisal.
L Miller
NHS, HEE, LLA, Faculty of Medical Coaches

Background:
Revalidation for doctors in the UK was introduced in 2012 in the aftermath of the Shipman enquiry. The aspirations for revalidation were quality improvement and there was concern that the formative aspects of appraisal should not be lost. As early as 2014 the King’s fund noted “Signs of tick-box behaviour in particular provide an early warning of the danger of focusing on compliance and process alone.”(1) In 2019, the second cycle of revalidation, clinicians are feeling the impact of staff short-falls and the resultant workload. Objections are voiced about the amount of time spent on appraisal portfolios and meeting the requirements of revalidation. Portfolios have a strong negativity bias encouraging reflection on Significant events, complaints and things that could have gone better. The tragic case of Dr Bawa Garba has had a profound impact on attitudes towards case based reflection for appraisal with a reflex refusal to document any reflection. This “knee jerk” reaction could potentially have the impact of some doctors producing inadequate appraisal portfolios, not something that would stand the individual in good stead in the event of future challenges. There is a shift in medical education recognising the need for capability rather than just competence to cope with the workload challenges and increasing complexity.(2) An ageing population with multi morbidities requires a healthcare workforce which is flexible and copes with new ethical, diagnostic and management challenges. Addressing complexity in 2001, Fraser and Greenhalgh wrote: “We believe that the imaginative dimension of professional capability is best developed through non-linear methods-those in which learners embrace a situation in all its holistic complexity. The most straightforward example of a non-linear method is the story.” (3) New approaches are required to motivate and engage postgraduate professionals with lifelong learning that stimulates, and enhances capability without fear of reflection being subpoenaed.

Methodology:
The rich narratives produced as pathography and more broadly in the Arts have a place to play in the development of capability in healthcare outside the ivory towers of the Medical Humanities “Academy”. The 2017 all party parliamentary report Creative Health(4) makes a compelling case for the arts for health and well being, a practical medical humanities. The well being of the care workforce is mentioned, albeit briefly. Themes arising during appraisals originate from experiences with certain patients groups or scenarios, personal experiences of healthcare or colleague feedback. Appraisees invited to choose a humanities PDP item related to a theme; a film, book, play or art work, universally respond with an animated, enthusiastic “Am I allowed?” Using the arts offers new insights and perspectives. A qualitative case study approach identified themes to prompt resource identification.

Results:
Examples of resources from the arts relating to themes emerging in appraisal discussions over a 3 year period are shared. This fresh approach as an adjunct to the “tick-box” elements of appraisal energises, re-engages and leads to profound, deep reflection on clinical work and the role of the clinician. Technical access issues for film will be discussed.

Discussion:
Democratising the use of the humanities for CPD and offering resources for PDP planning offers potential across the medical education continuum and beyond in nursing, allied health and social care practice. Reflecting on the human elements of practice strengthens capability, brings insights which go beyond the “strictly medical”(5) and as the late Dr Kieran Sweeney so articulately phrased it, facilitates “understanding and being with people at the edge of the human predicament”(6). Focusing on emerging themes from work rather than negative, single case based reflection offers scope for transformative reflection which reconnects with core values, enhances self efficacy and sustains motivation.

References:
What Continuing Professional Development do qualified Physician Associates want?
R Shorrocks, P Fletcher
Gloucestershire NHS Foundation Trust

Background:
Physician Associates (PAs) are new healthcare professionals trained in the medical model and part of the multidisciplinary team. Although non-rotational they are generalists [1] and need to complete 50 hours of continued professional development (CPD) yearly and sit a re-certification exam every 6 years [2]. Our Trust has no PAs’ CPD programme to help them achieve this. We wished to identify what CPD they wanted and how to deliver it. A literature search revealed nothing on CPD for qualified PAs in the UK due to the profession’s novelty. The US literature is scant [3,4]. The Faculty of PAs within the Royal College of Physicians offers supporting documents [5-8] providing prompts to what is needed.

Methodology:
A focus group established PAs’ opinions on the need for a generalist CPD programme. A two stage Delphi Process identified their wants and merging these with the learning needs signposted by their Faculty we designed and implemented a programme of CPD. Sessions ran for an hour fortnightly. The sessions’ formats were lecture based interspersed with interactive small group work. None of our PAs were due to sit a re-certification examination so we were unable to assess the impact our programme had on this. To assess the effect of the programme on their practice and what they hoped to achieve they evaluated each session. Once completed we asked them to evaluate the programme as a whole.

Results:
In our first survey our PAs prioritised topics by narrowing down the 70 patient presentations identified by their Faculty as those PAs should be competent with. Using the items ‘wanted’ by two or more PAs we created a further questionnaire with 23 broad topics. This enabled us to identify the curriculum areas the group valued most to include in the first year’s CPD programme. Our initial evaluation shows the variety of sessions were well received and they felt the programme allowed them to continue learning and develop their practice. They indicated they would like to see anatomy more frequently covered; does this reflect a relative absence in their original training? The final evaluation will highlight topics they want to cover on a rolling programme and also preferences about the length and frequency of the teaching.

Discussion:
There are no validated questionnaires to assess the learning needs of PAs or evaluate a programme of CPD. These had to be created using a focus group. We felt they confidently and competently selected the topics to be included within our first year’s programme. The issues prioritised were least easy to clearly define, perhaps suggesting that everyone could think of a specific condition they felt was a weak spot in their understanding and application. Were they looking for ‘something they could not get from the books’? There were many requests for not commonly encountered ENT and ophthalmology learning. Again does this reflect an absence in their original training? In contrast topics like trauma scored low possibly reflecting that the majority of our PAs work in A&E. This may need to be taught in future years as new PAs join the trust in less acute and specifically non-trauma specialities. It became evident that as permanent members of staff our PAs’ CPD curriculum should be spiral with topics revisited over time with increasing breadth and depth. This brings challenges, for as the programme continues, these future, more detailed sessions will also need to be accessible to any new PAs employed. PAs are new colleagues in our medical team yet their CPD has not been considered in detail. Due to their growing importance and presence within our hospitals, strategies for improving their experience at work and career progression are necessary. This study identified that a programme of CPD is actively wanted, needed and appreciated by our PAs and it can fit within the loose framework of needs cited by our PAs’ Faculty. The final piece in the jigsaw will be our PAs’ evaluation of our programme of CPD following their re-certification examinations.

References:
Fulfilling a new obligation: Sustainable Healthcare in the UK medical school curriculum

MS Tun
Imperial College London

Background:
Doctors qualifying or registering in the UK will be required to understand and apply the principles of sustainable healthcare to medical practice. The General Medical Council’s document ‘Outcomes for graduates 2018’ places a new obligation on medical schools to teach sustainable healthcare in the curriculum(1). Sustainable healthcare focuses on the improvement of health and better delivery of healthcare, rather than late intervention in disease, with resulting co-benefits to patients and to the environment on which human health depends. As sustainability is an emerging concept in the medical profession, this Master’s thesis project aimed to make evidence-based recommendations on best practice for implementing this new learning.

Methodology:
A qualitative exploratory approach used grounded theory to generate themes through the triangulation and analysis of multiple sources of data. Informal interviews were held with key stakeholder organisations in the sustainable practice of medicine, such as the Sustainable Development Unit (NHS/PHE), the Centre for Sustainable Healthcare, and with an NHS sustainability manager. Informed by a literature review and document analysis, questions were developed and used in semi-structured interviews with medical educators of varying backgrounds, who have been teaching about sustainable healthcare through their own interest. These educators were from eight medical schools around the UK which have diverse approaches to curriculum structure, teaching methods and assessment.

Results:
There was clear consensus from participants and the literature on the key barriers and enablers to implementing this new learning. Educators lack the knowledge and capacity to teach this new subject, which is also difficult to examine. However, many sources of support and learning resources are available. Of multiple suitable pedagogies, the most powerful impact on students’ learning is through being taught by clinicians engaged in sustainability and in contexts directly relevant to patient care. Institutional prioritisation of sustainability is important. While there is continual pressure on space in the curriculum, there is a growing demand from university students for sustainability to be addressed in their education and future careers, and a new approach to healthcare delivery is required for the long-term sustainability of the health service.

Discussion:
In 'Outcomes for graduates 2018' the GMC has introduced to undergraduate medical education the concepts of over-diagnosis and over-treatment, cost effectiveness, and treatment as a burden on patients. Sustainability is already one of the seven domains used by the Royal College of Physicians to define quality(2). Educators less familiar with sustainability may be open to learning at the same time as they are teaching it to students, and even to learning from students who may already be better informed. As awareness develops of present unsustainability, the emotional resilience of both students and educators may need to be supported. An understanding of the wider drivers of disease should be embedded into assessment. Educating new doctors to promote and practice sustainable healthcare may enhance satisfaction in clinical practice and has wider benefits for the healthcare system and the environment as well as for patients. Recommendations for implementing sustainable healthcare education include treating sustainability as a theme running through all subjects and year groups rather than as a topic, involving clinicians in the teaching as much as possible, sharing common learning resources among medical schools and embedding sustainability into assessment. There is a limited number of experts to access in this emerging field. Further research is needed to evaluate impact on students’ learning.

References:
Impact of the learning environment on students' learning strategies: a comparative ethnographic study
M Veysey, E Leopardi, R Duvivier, C Brosnan
Hull York Medical School

Background:
The pursuit of self-directed learning (SDL), and the development of self-regulated learning (SRL), is critical in both medical education and lifelong learning. Medical schools structure their programmes and curricula to allow students to engage in SDL, and develop SRL. However, learning environments, through the impact of their hidden curricula, often counter the intended objectives of the formal curriculum, preventing SDL and the development of SRL.

Methodology:
We conducted a two-site comparative ethnographic study in the context of a joint medical programme, delivered at two distinct medical schools, one an established urban school and the other a relatively new and rurally located one. Both schools were delivering the same formal curriculum. We used a combination of research methods to study the institutional ambition and the construction of the learning environment and compared this with the students’ adopted learning strategies during phase one (year one) of their programme.

Results:
Over the course of 12 months, we completed 17 interviews of students, two focus groups (n=16), and 101 hours of observation of learning activities. Furthermore, we conducted 18 staff interviews and 23 hours of meetings observations. We used thematic analysis of the data collected to determine the nature of the programme and to understand the students’ learning strategies. Moreover, we examined the data to uncover the hidden influences of the distinct learning environments at each of the sites.

Discussion:
The analysis of the learning environments revealed that, while explicit emphasis is placed on SDL, and the development of SRL, as a stated educational strategy, numerous subtle cues in the programme direct the students’ learning at each institution. These unspoken messages can be conveyed by multiple means including, course materials, assessments, learning facilitators and student organizations. Although, individually, staff members are aware of this influence, the formal curriculum and the operational activities of the medical school often underestimate the significant effect that these cues have on students. Better understanding of the learning environment, and the impact it has a student learning, is vital in assisting medical educators in acknowledging these implicit influences on the students’ learning and directing their students to achieve both SDL and SRL.

Presentation Details: Thursday 4th July, 2.20-2.40pm, Fyne
Improving clinic attendances for core medical trainees at a busy DGH
P Mithani, M Abu Baker, L Bafadhel
Southend University Hospital

Background:
Attending clinics is large part of completing the core medical training competencies. The minimum number of clinics required has now increased from 12 to 20 per annum. Core Medical Trainees (CMT’s) often struggled to attend due to busy medical wards, on-calls and staff shortages. This quality improvement project aimed to improve attendance with simple measures.

Methodology:
We collected data to assess the number of CMT’s attending clinic during their time off. A clinic rota was devised which allocated weekly afternoon clinic sessions for trainees. The first PDSA cycle included uploading the clinic rota onto the online on-call roster. The second PDSA cycle consisted of sending out clinic timetables for each speciality. The third PDSA cycle involved sending out more detailed timetables including named consultants and themes of the clinic, to provide trainees with choice. We collated data by sending anonymous surveys to ten CMTs. We monitored the percentage of trainees who were attending clinics in their own time and how many were on track to meet their ARCP requirements.

Results:
Initial data suggested that 70% of trainees had to come in on off days and during annual leave to complete their clinics. Following the first PDSA cycle, 57% had seen an improvement in their attendances, with 14% attending all of their allocated clinic sessions. The second PDSA cycle showed 25% of trainees had attended all their allocated clinics and that 100% of them found an improvement in being able to organise which clinic to attend. None of the CMT’s attended clinics in their own time and 88% of trainees were on target to meet their ARCP requirements. 75% trainees found ward duties the biggest barrier to attending clinics and this was consistent throughout the cycles.

Discussion:
We found that allocating clinic afternoons on the on-call roster eliminated the scheduling constraint of having to fit in clinics around the daily duties. Having a given day of the week set aside for clinic known in advance meant that arrangements could be made to provide adequate cover on the wards. Access to clinic schedules per speciality made organising which clinic to attend and who to confirm attendance with more efficient. Certain barriers to obtaining adequate clinic attendances were improved on; however ward duties remained the biggest hurdle with no improvement despite the rota. The implementation of the rota provided an overall improvement in the clinic attendances.

Presentation Details: Thursday 4th July, 2.40-3.00pm, Fyne
Navigating medical school: Exploring the experiences of Gateway programme medical students
R D'Silva, S Curtis, M Barker, J Rowland, J Cleland
University of Southampton

Background:
An increasing number of six-year ‘Gateway’ programmes specifically recruit students from widening participation (WP) backgrounds into medicine, aiming to improve the representation of students from lower socioeconomic groups (1). However, little is known about the experiences and progression of these students, though there is some evidence that success rates are lower than for traditional entry programmes (2,3). In an increasingly resource limited higher education environment, the success of WP students in progressing through medical school and into the workforce will be important for the sustainability of WP initiatives. This study qualitatively explores the thoughts, behaviours and experiences of medical students and recent graduates from WP backgrounds that may act as facilitators of and barriers to successful progression to professional practice.

Methodology:
Twenty-three semi-structured interviews were carried out with current students (n = 15) and recent graduates (n = 8) from a well-established Gateway medical degree programme at a UK university. These were audiotaped and transcribed and then inductively analysed using principles from Braun and Clarke’s thematic analysis method within a pragmatic research paradigm.

Results:
Initial analysis suggests that financial burdens, on-going competing responsibilities and struggling to fit in with the prevailing medical student culture all negatively affect students during their six-year programme. However, positive factors include the deep motivation for medicine of most students, the programme structure and faculty support in the first year that produces an enduring sense of family and belonging throughout the programme, and the gradually increasing sense of integration of Gateway programme students within the wider medical school. Further analysis will be presented at the conference.

Discussion:
It is important to recognise that the circumstances that qualify a student for a Gateway programme are unlikely to disappear on entry; the situations that prevented them from fulfilling their academic potential at school may still be at play. Gateway programme students are themselves a heterogeneous group and come from diverse backgrounds, but many participants talk about the shared financial and social challenges of being from a WP background. They are acutely aware of a sense of difference between them and their perception of a ‘typical medical student’, even while they mostly report feeling accepted and included in the medical school community. This analysis brings a greater understanding of the often conflicting experiences of Gateway programme students navigating the liminal space between who they are and their future professional identity. We hope this will enable medical schools to better support students from WP backgrounds through to graduation and successful professional practice.

References:
Being a clinical teacher: experiences, identity and progression
S Bussey
Newcastle University

Background:
Clinical teachers are responsible for the workplace teaching of Bachelor of Medicine, Bachelor of Surgery (MBBS) undergraduate medical students in the UK. The aim of this project was to investigate how clinical teachers experienced their role within the Foundations of Clinical Practice (FoCP) rotation of an undergraduate MBBS medical degree offered by a University in the North of England. There were two main research questions:
1. How do clinical teachers experience their role?
2. How are clinical teachers prepared for and supported in their role?
Comparatively little research has been conducted to explore the experiences and perceptions of clinical teachers, which is essential to fully understand their role (1). Such an understanding is necessary for both universities and the NHS to put appropriate support and incentives in place to ensure that they can recruit and retain sufficient clinical teachers to teach an ever-increasing number of medical students.

Methodology:
Semi-structured interviews were conducted with thirteen clinical teachers involved in the delivery of the FoCP rotation (delivered during year three of the MBBS programme). An inductive approach based on a social constructivist philosophy was adopted, and thematic analysis used to identify emergent themes from participants. Twenty-nine documentary sources from the university were subsequently collected and used to contextualise the emergent interview themes.

Results:
The findings of the research indicated that the role of the clinical teacher is opaque and changeable. Factors such as professional background, seniority, organisational and personal factors all influence how teachers experience their role. The main research findings to be presented relate to the following themes:
- Role - Eight overarching principles that underpin the clinical teaching role were identified. These principles were evident across multiple themes and demonstrated the underlying philosophies that characterise the clinical teaching role. However, the specific role of a clinical teacher was not well delineated or matched between different hospitals, clinical specialties, departments or rotations, even within the same MBBS course from a single university.
- Identity - Student interactions have a potentially powerful impact on clinical teacher identity, and whether teachers view their experiences as positive or negative. The role of an ‘alternative pragmatic identity’ in clinical teacher identity development was pinpointed and related to the current uncertainty regarding the NHS system and political climate.
- Role-modelling - A theoretical model was proposed to conceptualise the nature of role modelling in clinical teaching. A key challenge expressed by many participants was the lack of (or difficulty in identifying) relevant career role models on whom they could fashion their own educational and clinical careers.
- Staff preparation and development - The preparation of clinical teachers was a lengthy continuum rather than something that happened only at the commencement of a clinical teaching post. Development needs of clinical teachers varied according to their career stage and seniority.
- A model of clinical teaching was developed to illustrate the findings of this research and demonstrate the interactions and connections between the key aspects of the clinical teacher role.

Discussion:
Theoretical outcomes of this research are the importance of identity as a concept, the value of role models in educational career planning and the representation of clinical teacher role preparation as an extended continuum. This research concluded that if universities and NHS employers are better able to understand the relationships between the identity, experiences and development of clinical teachers, then they will be better placed to match the real needs of clinical teachers in terms of the ‘university offer’ of staff training programmes and teacher support initiatives.

References:

Presentation Details: Thursday 4th July, 2.00-2.20pm, Boisdale 1
Development of a clinical teacher identity: the influence of the Community of Practice
S Bussey
Newcastle University

Background:
Clinical teachers are responsible for the workplace teaching of Bachelor of Medicine, Bachelor of Surgery (MBBS) undergraduate medical students in the UK. The aim of this project was to investigate how clinical teachers adopted a teaching identity within the ‘Community of Practice’ (CoP) of a foundations of clinical practice (FoCP) rotation of an undergraduate MBBS medical degree offered by a University in the North of England. The way that a teacher perceives their teaching identity can influence how they experience the teaching role (1). Clinical teachers are healthcare professionals before they are teachers and are therefore adapting their own sense of identity to incorporate the ‘teacher’ role into an existing ‘clinical role, rather than transforming from a student teacher into a teacher (2). Jenkins (3) highlighted the concept of clinical teacher identity being primarily a social construct which is intrinsically linked with and shaped by their CoP (4); this may include influences exerted by their colleagues, students, workplace organisational structures, management strategies and the culture of the university with which they are associated. This research explored this relationship between teaching identity and CoP in a defined case study.

Methodology:
Semi-structured interviews were conducted with thirteen clinical teachers involved in the delivery of the FoCP rotation (delivered during year three of the MBBS programme). An inductive approach based on a social constructivist philosophy was adopted, and thematic analysis used to identify emergent themes from participants. Twenty-nine documentary sources from the university were subsequently collected and analysed using the emergent interview themes.

Results:
Of the 13 participants, just over half talked about their professional identity. For some this appeared to be of particular importance, since they made several references to different aspects of identity within their interviews. The broad category of identity had two very clear sub-sections within the interviews; potential role conflict of being a teacher and a clinician at the same time while maintaining balance, and the importance of role models in regard to influential teaching role models, the importance of being a good role model to students and seeking out aspirational career role models to inform their own career path. CoPs within clinical education are by nature distinctive to the hospital and department within which they exist. Even within the FoCP rotation in a single hospital site, differences in the ways that communities of practice functioned were evident between different clinical departments. Participants asserted that the CoP within which they were working had a direct influence on how they developed a teaching identity, and how they experienced their teaching role.

Discussion:
The social constructivist standpoint within this research is deemed appropriate, as the data clearly show how the identity and perceived experiences of clinical teacher participants were influenced by their CoP. Regarding CoPs first described by Wenger (5), the findings of this research align very closely with the revised firms and fraternities model developed by Cantillon et al. (6). By their very nature, CoPs are established locally and shaped by their members. It is therefore not possible for outside agencies to impose their ideas on how any CoP should operate. However, the findings of this research did highlight ten factors which participants identified as being necessary to promote a CoP with a positive culture for clinical teaching. These particular factors may be promoted by institutions, giving universities an opportunity to promote a positive CoP in the clinical setting and thereby the potential to facilitate teacher identity development.

References:

Presentation Details: Thursday 4th July, 2.20-2.40pm, Boisdale 1
Developing and Maintaining Teaching and Supervision Skills: A Survey of Hospital Consultants' Learning Needs

N Tabern, N James, P Stewart, R Parikh
Pennine Acute NHS Trust

Background:
The GMC sets standards for recognising and approving trainers which are aligned to the “Professional Standards” of the Academy of Medical Educators (AoME)1,2. Health Education England supports the development of trainee doctors as future educators through initiatives (including a Postgraduate Certificate in Workplace Based Postgraduate Medical Education)3. However, there is a need to maintain and develop the skills of consultant supervisors. A Medical Educators Development Scheme (MEDS) at Pennine Acute NHS Trust (PAT) offers workshops on a monthly basis (matched to AoME descriptors) to support supervisor development. Sessions include: feedback; small/large group teaching; creating good clinical placements and trainees in difficulty. We surveyed our trainers to create new session titles and refresh existing training.

Methodology:
A survey was circulated to all PAT supervisors. The questionnaire asked trainers to consider what would be useful to know to aid their day-to-day interaction with trainees. Trainers then reflected on what they would have liked to have known when they first became supervisors. Trainers were then asked to reflect on interactions that “made them stop and think”. The responses were reviewed by a panel comprising a Foundation Year 1 doctor, Specialty Registrar and a Consultant. The panel aimed to create session titles/outlines that matched reported supervisor training needs and (when viewed through the prism of a learner) met the needs of trainees.

Results:
The survey was completed by 93 of 383 supervisors. The following new session titles emerged:
1. Portfolios and technology: 70% felt they required support. Supervisors noted they encountered different electronic portfolios depending on trainee grade. This was viewed as challenging: trainers wanted practical help and advice.
2. The curriculum and trainee needs: 20% felt a session would be valuable. Along with different e-portfolios, different grades had varying needs. Training to help supervisors appropriately meet the learners’ curriculum needs (and personal goals) was desired.
3. Career choices: 23% expressed an interest in a session on career options, 9% felt contacts in other specialties would help, and 10% wanted to know more about career counselling.

The other key training need reported was trainees in difficulty. 12% felt training would be beneficial. Supervisors broadly categorised concerns into: clinical performance; behaviour/attitudes and health concerns. They wanted training to develop their feedback and mentoring skills. They also required information on accessing help when struggling to support a trainee. Overlapping with the above, post-graduate examinations were an area where trainers wished to develop counselling and mentoring skills and cited this as an issue for some trainees in difficulty.

Discussion:
The survey highlighted practical difficulties encountered by trainers looking after different training grades. We had not expected the extent of difficulties reported due to the variety of e-portfolio systems. Thus, we will provide appropriate training. Similarly, curricula vary. We will develop a session exploring how to match training to needs and use foundation trainees as an example. This grade is the most frequently encountered and can be used as an example all specialties could relate to. Supporting learners with their career choices, or those in difficulty, highlighted a learning need for trainers. Mentoring and feedback were reported as key skills to develop. Currently, the MEDS programme tackles feedback and trainees in difficulty, but there needs to be a greater focus on counselling and mentoring. This survey provides insight into the needs of current supervisors and will be pivotal in designing our future programme. We would encourage other hospitals to survey their trainers and provide “faculty-development” activities.

References:

Presentation Details: Thursday 4th July, 2.40-3.00pm, Boisdale 1
Know thyself: does medical school examiner marking correlate with self-perceived hawkishness?

N Molony, P Kevern
Staffordshire University/Dudley Group Foundation NHS Trust

Background:
Objective: To survey undergraduate examiners’ rating of their marking as hawk or dove with a questionnaire, and correlate this with their actual marking in undergraduate finals exams to assess accuracy of their self-perception.

Methodology:
A Questionnaire survey was undertaken also gathering demographic data of examiners at Birmingham Medical School final exams. Its results were compared with marking data for individual examiners displayed on box and whisker plots, which were used to derive definitions of moderate and severe hawks and doves. A hawk was defined as an examiner whose interquartile range was below the median mark for that station; a dove had the interquartile range above the median.

Results:
101 Examiners gave full replies. Fifteen were identified as hawk or dove from marking data, nine doves and seven hawks. All doves had to some extent identified as such on the questionnaire, while three of seven hawks had marked themselves as minimally dovish. The response to a question addressing whether to pass or fail a globally borderline candidate correlated with self-rating as hawk or dove. The only correlation with demographic factors assessed was that examiners who also undertook post-graduate examining were more likely to be outliers than the rest. Age, duration of examining experience and possession of an educational qualification had no effect on overall likelihood of being a hawk or dove. Most examiners (73%) looked at feedback given on their past performance, of whom 19% were surprised by it. Hawk and Dove examiners were less likely to have looked at their feedback than others, and were more likely to have been surprised by it.

Discussion:
15% of examiners marked as hawks or doves. Only half of hawk markers were likely to realise they were, while all dove markers identified as such to some extent.

Presentation Details: Thursday 4th July, 3.00-3.20pm, Boisdale 1
Teaching Fellows tackle Tertiary Centre Paediatrics - a model for undergraduate paediatric education
M Parker, C Tsilifis, P Gaunt, N Jansen
The Newcastle-upon-Tyne NHS Foundation Trust

Background:
Teaching Fellow (TF) posts are increasingly commonplace in undergraduate medical education1. TFs prove popular with students due to good knowledge of the curriculum, approachability and their near-peer status2. No literature regarding paediatric-specific TF posts is currently available. The Great North Children’s Hospital is a large tertiary paediatric centre where part of Newcastle University’s undergraduate paediatrics curriculum is delivered. In 2015, the Trust appointed four teaching fellows to facilitate Child Health teaching. As a result all undergraduate teaching is now organised by the TF team, and no longer by consultants or specialty trainees. There is currently little research into the potential negative impact of TF roles.

Methodology:
Feedback from 2013-4, prior to implementation of TFs, was compared with feedback from current medical students (2018-9). Students were asked to rate the rotation in terms of facilities, organisation, delivery of teaching, support and feedback/assessment on a 5 point scale from poor to excellent. Students also had the opportunity to offer free-text comments relating to positive parts of the placement and ways it could be improved. Results are compiled by Newcastle University and percentage satisfaction calculated for each category.

Results:
There was an improvement in satisfaction in the organisation and induction, teaching, educational support and feedback and facilities within the rotation. Overall, the TF-led rotation received a 95.24% overall satisfaction score in comparison to 82.1% prior to the introduction of TFs. In comparison to pre-TF introduction, thematic analysis of free-text comments pertained to relevance of teaching to students’ level of training, increased academic and pastoral support for students on a busy clinical rotation and the availability of TFs for both academic and timetabling queries.

Discussion:
The positive impact of a TF-led undergraduate paediatric programme is evident as students view the programme as structured, relevant and organised whilst recognising TFs as a useful resource. The near-peer format enables a comfortable and safe learning environment with teaching focussed upon student learning needs and outcomes. Nevertheless, the potential downsides of TF roles specific to paediatrics are yet to be explored. Some may argue that TFs remove opportunities for trainees to become immersed in delivery of teaching; a valued skill advocated by the General Medical Council. Additionally, given that teaching fellows have previously not been paediatric trainees, there could be issues regarding expertise and quality of teaching delivered. Consequently as a continuation of this project we aim to survey a combination of senior and junior doctors, nurses and AHPs to investigate this further.

References:

Presentation Details: Friday 5th July, 9.40-10.00am, Boisdale1
The icing on the cake: why should healthcare professionals volunteer to be part of a simulation faculty?

L Baxter
South Tyneside District Hospital

Background:
South Tyneside District hospital is in the process of developing a simulation faculty this year. Courses are being provided for junior doctors and multidisciplinary teams on a wide range of topics. There is a need to develop a large faculty to deliver these. At present faculty are giving up their own time to help with simulation. This study aims to find out what, if anything, is in it for them? Can you learn from delivering simulation or do we just do it for the love of teaching?

Methodology:
Faculty ranges from F2 doctors to consultants in a wide range of specialties, and allied healthcare professionals. Courses are delivered on acute and communication scenarios, and scenarios involving leadership and developing other non-technical skills. These courses are delivered to Foundation Doctors, Core medical trainees and multidisciplinary groups. Faculty were asked to fill in anonymous feedback forms following assistance on a variety of courses. All faculty are sent the scenarios and some notes to help guide debrief, including refreshers of guidelines, prior to the course. They are invited to observe other scenario decribfs in the session if they wish.

Results:
In total, 18 faculty members were surveyed after 6 courses. Faculty included medical consultants, anaesthetic consultants, radiographer, and junior doctors. 83% strongly agreed helping with the session had been useful for personal development and 17% agreed. 100% felt the experience overall was valuable and 100% enjoyed being part of the faculty. Free text questions asked ‘Have you learnt anything from today’s session about simulation, patient care or from the learners themselves?’ 100% of respondents had a learning point about simulation, including gaining skills and confidence in the technology and debriefing. 61% also gave learning points about patient care and from the learners. These came from both senior and junior faculty. 100% of respondents felt more prepared to support trainees in clinical practice after helping with simulation. Examples of learning points about patient care included:

- De-escalating techniques for aggressive patients
- Seizure management
- Review of mental capacity act
- ALS algorithm refresher
- Handover tips

Examples of learning points from the learners themselves included:

- Everyone doubts themselves no matter how senior they are- it’s normal to feel unsure and insecure
- Different communication styles
- Importance of human factors in clinical environments
- Insight into other wards and how they work

Discussion:
Faculty members learn a huge amount from helping deliver simulation courses. These learning points not only enable them to become better educators and mentors in clinical environments, but also include aspects of patient care and hospital process. Other than the enjoyment of teaching that 100% of our respondents felt, and the obvious portfolio or appraisal benefits, this study showed there is a lot of learning to be gained by joining a simulation faculty. This learning could contribute to personal development in educational roles but also clinical and healthcare roles as well.

Presentation Details: Friday 5th July, 9.20-9.40am, Boisdale 1
Two birds, one stone: Creating a Foundation Simulation Role
L Baxter
South Tyneside District Hospital

Background:
South Tyneside District hospital is in the process of developing a simulation faculty this year. Courses are being provided for Foundation and Core training doctors, and multidisciplinary teams on a wide range of topics. There is a need to develop a large faculty to deliver these. Trainees at South Tyneside were previously surveyed on their experience and reported a lack of opportunities to teach. Not all trainees had managed to complete a full audit or quality improvement cycle as per their curriculum. An opportunity to address both these problems was seen, with the development of a voluntary Foundation Simulation Champion Role.

Methodology:
F1 doctors (first year post qualification) were recruited in April to be a ‘Simulation Champion’ in their F2 year. Of 26 doctors, 10 applied and were appointed. The role is supported by the Simulation Fellow. Following an initial meeting with the Simulation Fellow, the following agreement was established:
The Foundation Simulation Champions will:
• promote simulation within the trust.
• assist with preparation and delivery of simulation (minimum 3 days commitment).
• complete a QI project (full cycle) within simulation.
The Simulation Fellow will:
• support and assist the Foundation Champions with their QI projects.
• provide simulation training and promote any regional training opportunities to the Foundation Champions.
• give feedback on teaching and debriefing skills.
• provide certificates and letters of reference.

Results:
The Foundation Simulation Champions are in the process of completing 3 quality improvement projects in simulation: using simulation to improve Foundation doctors’ confidence and ability in acute scenarios, using simulation to improve trust wide performance in managing Acute Coronary Syndrome, and using simulation to improve multidisciplinary communication in difficult scenarios. They have partly or wholly supported 55% of simulation courses to date. 3 have attended a faculty development training day. They have also contributed to the scenario bank.

Discussion:
The Foundation Simulation role has allowed Foundation Doctors to develop their teaching and organisational skills. It has also given them a chance to develop skills in clinical governance, specifically audit and quality improvement. There help with simulation has been invaluable in allowing the smooth running of all courses to date. Through their enthusiasm, other junior doctors have come forward to help with faculty as well. The Foundation Simulation Champions have verbally reported they are enjoying the role and have learnt a lot. In April they will be anonymously surveyed to establish whether they have found the role a useful learning process and if they perceive it has increased opportunities for them. They will also be asked to recruit the next round of Foundation Simulation Champions from the F1 cohort, through advertising and interviewing for the role. This will allow further development of their leadership skills. By April it is expected their own projects will be complete and they can support the new Foundation Simulation Champions in designing and starting their own projects. By continuing in this way, the role will be self sufficient and will continue to progress even when the current Simulation Fellow is no longer in role. The Foundation Simulation Role has provided significant support to the simulation faculty as well as valuable insight in designing further simulation to address patient care issues and evaluating current simulation courses. It has allowed the Foundation Doctors to develop a new skillset useful for their future careers in any specialty and will hopefully encourage many to continue to be involved in medical education.
What becomes of the Teaching Fellows and why? Exploring how teaching fellow posts impact on doctors’ career development through a synthesis of visual and narrative accounts - a pilot study
E Shaw, R Thomson, J Fisher
Northumbria Healthcare NHS Foundation Trust

Background:
Applications to specialty training programmes have fallen dramatically in recent years [1]. Alongside this trend, taking time out in a teaching fellow (TF) post is increasingly popular[2]. This could be perceived as concerning, given the importance of doctors progressing to complete their training in order to meet the healthcare needs of the population. However, does the impact of the TF post have important benefits for career development, and more broadly the healthcare system? Given the increasing popularity of more flexible career pathways therefore, it is vital that the impact of TF posts on career development is understood. Previous work has explored, amongst senior medical educators towards the later stages of their career, their “transition into a new identity as a medical educator”, and in doing so, identified factors contributing to this process [3]. Our assumption is that such transitions are less absolute. Identities are multiple, dynamic and context specific - in the context of TFs, teachers of students are not only doctors, but are students of teaching themselves. This is a pilot study, which aims to assess the feasibility of a novel mixed methods approach in exploring impact of a TF post on the holder. We will draw on social identity theory [4] to explore the transition experienced by previous holders of a TF post, and how the assortment of identities available to them impacts on this process. If the novel method is found to be feasible, it will form the basis of a larger project to more fully explore what becomes of the teaching fellows, and why.

Methodology:
Approval was granted by Northumbria Healthcare’s Research and Development department. The project is a mixed methods study, drawing on both semi-structured interviews and participatory visual methods. In this research participants work with a professional artist and the researcher to produce a ‘storyboard’; a series of drawings that represent their experiences before, during and after their TF post. The discourse between researcher, artist and participant during this process will be audio-recorded, providing an additional source of data which will facilitate deeper insight into the process of how the storyboard was made. Once completed, participants undertake an audio-recorded one-to-one semi-structured interview with the researcher. The storyboard generated is used to provide an initial prompt for discussion in the interview. The novel synthesis of drawing and verbal research methods facilitates deeper understanding of the phenomenon of study, to allow the ‘story’ of each TF to be told more vividly. The pilot study will consist of three participants. The results will be analysed through two methods. Firstly, thematic analysis will be used to analyse audio-recorded data. For analysis of the images themselves, a modified version of Rose’s 2001 critical visual methodology framework will be employed [5]. Rose describes three areas for consideration - the production of the image, the image itself and the site(s) where it is seen by various audiences.

Results:
The results of the project are not yet available as the storyboard production and semi-structured interviews are scheduled to take place in February-March 2019. Results will be analysed by May 2019.

Discussion:
We will discuss the feasibility of this novel mixed methods approach, combining visual and narrative accounts, as a means of exploring how TF posts impact on the holder. The visual method in particular is novel, and thus we will discuss the benefits and limitations of this as an approach. We will discuss the feasibility of analysis using Rose’s visual methodology framework. Acceptability to participants, logistics and quality of data gathered will also be discussed. We will also discuss the initial findings from our pilot study, regarding impact of the TF post on career development.

References:

Presentation Details: Friday 5th July, 10.00-10.20am, Boisdale 1
Identifying the learning needs of Primary Care Physicians in remote rural communities using an ethnographic approach

A Hassell, L Dikomitis, E Dayrit, G Apostol, I Agus, S Caranay-Narag, J De Guzman, T Shepherd, M Dayrit
Keele University, Staffs, UK and Ateneo School of Medicine and Public Health, Manila, Philippines

Background:
The Philippines currently has a fragmented primary care system with weak preventive and promotive aspects. Modelled on American medical curricula, the Philippine medical education system is decidedly urban-based, specialist-oriented and hospital-centric. As a consequence, undergraduate medical education does not sufficiently prepare graduates to function effectively as primary care physicians (PCPs), particularly to work in the country’s remote, rural provinces (where 55% of the population reside). In order to develop a postgraduate programme for rural PCPs it is paramount to gain insights into the experiences of rural PCPs, to map out the roles and functions of PCPs and to establish which competencies need to be developed. Objectives To identify the learning needs of primary care physicians (PCPs) using an ethnographic approach

Methodology:
Ethnographic fieldwork performed in January-April 2018 in one rural, remote province of the Philippines (with a population of approximately 632,000 and 44 PCPs employed in the province). Two-week observations in 18 government-run primary care facilities and 14 semi-structured interviews with PCPs working in these facilities. Thematic analyses of the transcribed data were performed

Results:
Four over-arching themes emerged: (i) Barriers to healthcare delivery: scarce resources, including physical infrastructure, drugs and personnel; overwhelming demand in which acute care is often prioritised over care of patients with chronic conditions; lack of infrastructure for effective health promotion. (ii) The multiple roles of PCPs, some of which are potentially unsustainable. These include management of patients requiring acute medical and surgical care; management of patients with chronic health conditions; leadership and co-ordination of health promotion; human resource management; oversight of the supply chain; lobbying for resources. (iii) Dealing with the local politics of healthcare. PCPs work in a decentralised healthcare system in which local politicians are key in deciding resource allocation. An understanding of local politics and ability to navigate through it emerged as an important issue. (iv) The specific learning needs of PCPs and issues of doctor retention. This included specific clinical subject-based learning needs but also broader needs in terms of leadership, mentorship and resilience. The group is using these data, together with inputs from other stakeholders: 1. To develop outcome based competencies for PCPs. Identified competencies include, as expected, skills and knowledge in: managing patients presenting with acute medical conditions; acute obstetric care; chronic disease management (including mental health conditions); health promotion; But also important, skills and knowledge in leadership and management, human resource management, local negotiation. 2. To develop educational strategies for supporting these doctors who can easily become professionally isolated. Participant feedback has provided useful data on strategies likely to succeed (as well as those less likely to). 3. Less expected, our findings make a compelling argument to feed back to the Ministry of Health regarding the potential unsustainability of these roles.

Discussion:
This ethnographic approach to identifying the competencies and learning needs of a key group of doctors practicing in a remote rural setting is providing invaluable data which will inform the educational development of PCPs across the Philippines.

Presentation Details: Wednesday 3rd July, 3.50-4.10pm, Boisdale 2
Background:
Internationalisation is becoming an increasing part of higher education. The need to gain an understanding of the interdependence of nations and provide better employability for our students is one driving force behind this. In medical and health curricula though, there is a more direct need for this to occur. Emerging health problems create novel challenges for healthcare systems. From the spread of arboviral infections such as dengue fever into new regions to the increasing prevalence of lifestyle-associated disease in the global South, the situation is constantly evolving and we must prepare our students to do so too. A very large part of this involves students gaining an awareness and sensitivity to cultures beyond those they have grown up with. Many of them will be required to work closely with colleagues and service-users with very different backgrounds than their own. The biggest challenge is how to bring this into a curriculum without the requirement for all students to engage in costly international travel, whilst still ensuring an authentic and fulfilling experience. To this end technology can be a significant help. In this presentation we describe an innovative pilot project between Keele University School of Medicine (UK) and Botucatu Medical School (Brasil) in which we utilised problem-based learning (PBL) at two geographically distant sites to connect students and run a series of synchronous learning activities. Objective: To develop a sustainable, synchronous learning activity between students attending two geographically distant medical schools.

Methodology:
Participants: volunteer junior medical students from each school, all of whom were comfortable communicating in English. Faculty were teachers in each of the medical schools. Learning content: This was developed by the authors. It was decided to choose an area of clear mutual interest in which participants could bring distinctive, relevant local experience. Technological approach: We set up a synchronous classroom at each site with a lead facilitator based at the UK site. Using Google Hangouts® we ran the PBL session as if all were in the same room, engaging in discussion and generating learning outcomes. Students exchanged mobile numbers and communicated between sessions via WhatsApp® messenger.

Results:
The focus of the learning was a case of an emerging pandemic influenza strain, with learning objectives focusing on the global public health response from both Brasil and the UK. Five second-year medical students from both Keele and Botucatu took part, with 3 key academic staff at both sites providing local contact and facilitation. The synchronous meetings comprised 2 PBL sessions and 1 seminar. Students produced presentations in teams composed of at least one student at each site, which they presented back to the staff and the group in the final session. In addition, the student-established “WhatsApp” group proved very popular and was heavily used. Six months after the formal sessions, student continue to communicate via the group.

Discussion:
The pilot project was incredibly well-received by both staff and students. The unexpected outcome was that the students quickly developed a great respect, understanding and friendship with each other, exchanging messages and cultural information outside of the sessions, which continues to this day. Although there were technological issues, we have demonstrated clearly that these were minor and that this project could be scaled up with minimum additional effort. The authenticity of the experience of working directly with individuals from very disparate cultural backgrounds was a real benefit of this process. Essentially, this “proof of concept” study has provided us with encouragement about the viability of such synchronous learning between schools in different continents. Our intention is to develop the pilot further this year with formal evaluation to include real time observation by a researcher.
Does interprofessional learning change interprofessional practice?
L Chase, P Fletcher
Gloucestershire Hospitals NHS Foundation Trust

Background:
Medical professionals work in increasingly high pressured environments. An efficient service can help maintain safety; collaborative team working aids this1. Interprofessional learning is a way of achieving this. The public enquiry into Children’s heart surgery at Bristol Royal Infirmary found interprofessional education improves collaborative working and therefore patient safety by empowering members of the multidisciplinary team to speak out if something isn’t right2. The Department of Health produced a framework for lifelong learning in 2001 which highlights the importance of interprofessional learning3. Despite this little research exists in medical or education literature on changed practice outcomes from interprofessional education. A search of medical databases in September 2018 revealed only 7 articles on interprofessional learning for postgraduates.

Methodology:
To answer our research question we designed and implemented an interprofessional learning program for a gastroenterology ward based team at a district general hospital. Sessions ran for an hour every 2 weeks and all members of the multi-disciplinary team were invited. The sessions varied in teaching format based on existing educational research5,6. Formats used were; practice-based small group learning(PBSGL), in-situ simulation and team resilience/conflict resolution training. In PBSGL a case study is discussed relevant to the team’s practice and they decide how to manage the patient5. In-situ simulation was followed by a de-brief focusing on how they worked together to manage the situation6. Sessions were voluntary and advertised via posters. To measure the impact of interventions, participants first completed the Assessment of Interprofessional Team Collaboration Scale(AITSC)4 and a questionnaire on preferred content. AITSC is a validated scale designed to assess collaboration within teams. It can also be repeated to assess changes over time after an intervention4. We repeat ATICS after the program has been running for 6 months. The analysis compares the ‘before’ and ‘after’ data by individual, profession and team. The evaluation finishes with a focus group to gain qualitative data on how the participants felt the program has affected their collaborative working. We are especially interested in how doctors joining a well-established team feel interprofessional learning impacts their integration into said team.

Results:
We received responses from 17 participants who completed the questionnaire and ATISC scale. Three respondents did not complete the full ATISCs scale so were excluded from data analysis. Descriptive data of those participating as well as comparisons between ‘before’ and ‘after’ AITSC scale results will be presented along with the results from our focus group.

Discussion:
The AITCS tool was validated in Canada with respondents from different areas of clinical practice4. The authors comment that it may not be applicable to populations outside Canada4. However there are few validated tools for this purpose which may be why there is so little original research in this area. Indeed the more widely used Readiness for Interprofessional Learning Scale (RIPLS) has been criticised as it is not clear what it measures7. AITCS does not have this problem so was felt to be a more appropriate tool for this project. The initial responses to the AITCS scale were higher than anticipated. The ward has a good nursing management team with a low turnover of staff. This is likely contributing to the high scores from nursing staff. We postulate that the full data set will show a bigger improvement between the scores of non-nurse health care professionals. Of particular interest are those whose membership of the ward team is more peripatetic, for example doctors who rotate though the ward 4 monthly. Changes in scores apart, we want to know whether the staff involved feel that the intervention has improved their collaborative working.

References:


Presentation Details: Thursday 4th July, 2.00-2.20pm, Boisdale 2
Integration of mixed data types: how does it all hang together?
H Foster-Collins
University of Exeter

Background:
My current research study is a cross-professional comparison of the workplace support which new medical and teaching professionals receive during their first year of practice, who they learn and get help from, and the sociocultural and organisational factors which influence this. This multi-stage project involves the use of both primary and secondary qualitative datasets, of different sizes, collected within different contexts. Therefore, some consideration was required of how the different stages of research would link together and how the features of these different datasets might influence data analysis.

Methodology:
This research project was designed with three sequential stages. First, a secondary analysis of a large combined dataset, consisting of narrative interviews and audio diaries from postgraduate (F1) doctors at four UK hospitals. Secondly, the collection and analysis of a smaller primary dataset, consisting of narrative interviews and online ‘stories of support’ by newly-qualified teachers (NQTs) in English secondary schools. Finally, a cross-professional comparison of the themes arising, with an analytical reconsideration of the doctor data using findings from the teacher data. Although there is little to draw upon in the current literature which specifically looks at combining qualitative primary and secondary data, some of the same issues of integration may apply as relate to ‘mixed methods’ projects more generally. Therefore, an examination of how the primary and secondary data sets in this study could be analysed, both separately and in combination, and how each stage of research would influence the next, was made with reference to discussions by Fetter and colleagues (1) on integrating quantitative and qualitative data, and by Cronin et al. (2) on the integration of data produced using multiple qualitative methods.

Results:
Integration is the process of linking different stages of research and/or differing types of data to create a coherent whole, and this can be achieved through various approaches: via the research design, through the interpretation of data, and through the approaches used to report findings (1, 2). This presentation will discuss how a planned approach to integration was devised, so that each of the three sequential research stages helped to support and build upon the other, rather than existing as discrete, independent parts. In addition, I will explain how the strategies of connecting, building, merging and embedding were used to build linkages between the different data sets.

Discussion:
Secondary qualitative data is increasingly being made available (3) and re-use of this data is actively being promoted by research bodies such as the Economic and Social Research Council (4) due to savings in participant time and research costs. Being able to integrate qualitative data from both primary and secondary sources means that researchers can fully utilise previously collected data, whilst allowing novel analytical comparisons to be made with new data; in this case, comparing different participant groups such as early-career medical and teaching professionals.

References:
Multidisciplinary simulation to influence widespread culture change in falls prevention

L Baxter, S Thirugnanosothy, C Peel, D Metz
South Tyneside NHS Foundation Trust

Background:
Inpatient falls are common and falls in hospital are the most commonly reported patient safety incidents, with more than 240,000 reported in acute hospitals and mental health trusts in England and Wales every year (1). South Tyneside District General hospital has a multidisciplinary falls prevention care plan developed in line with 2015 National Audit of Inpatient Falls recommendations (2). This should be completed for all patients over 65 or aged 50-64 who are judged by a clinician to be at increased risk of falling. Completion of the FCP is 57% trust-wide and 48% on the admissions unit (Jan- May2018). Healthcare professionals have the knowledge but widespread culture change was required. Healthcare professionals surveyed anonymously in this trust mentioned they felt the falls prevention care plan was 'excessive' and 'not a priority.'

Methodology:
An emotive simulation session required participants to communicate with an upset relative whose loved one had an inpatient fall. The session was designed to highlight the potential devastating consequences of a fall, as well as healthcare professionals' responsibility to take simple measures to reduce this risk. Participants were surveyed before and after to establish their thoughts on the falls prevention care plan. The admissions unit multidisciplinary team (MDT) and new doctors were targeted as compliance was poorest in these areas.

Results:
Simulation was delivered to 37 attendees over 5 lunchtime sessions: 23 new doctors and 16 admissions unit MDT members. The sessions consisted of the 10 minute simulation, followed by a 20 minute debrief discussion. Before the session 58% of participants felt the falls prevention care plan was important for patient care and 23% felt it was extremely important. Post session this was 46% and 51% respectively. 89% of attendees said they were more likely to complete the falls prevention care plan following the session. Post session free text comments on the falls prevention care plan included “Important”, “Relevant” and “An essential part of patient care.” Pre session comments had included “Time consuming”, “Laborious” and “Meh.”

Discussion:
These results suggested a positive culture change, Unfortunately compliance with the falls prevention care plan did not improve. The average compliance in the month following these sessions was 49%. When staff were surveyed the most common reasons cited for not completing the falls prevention care plan were time pressures and lack of staff. While the simulated session has value in changing healthcare professionals’ attitudes to the falls prevention care plan, staffing and time pressures hindered a subsequent change in clinical practice. To improve falls prevention these challenges also need to be targeted.

References:
Inter-Professional Education

Oncology interprofessional education: rolling with roles
R Hayhurst, H Mottershead, S Ralph, S Fullwood, A Rehman
NHS Dudley

Background:
Interprofessional education (IPE) has been shown to improve collaborative working and enhance patient care [1]. Hence it is becoming increasingly prominent in medical school curricula. In response to student feedback at Russell’s Hall district general hospital, the delivery of IPE was recently redesigned to promote knowledge of interprofessional roles rather than acquisition of clinical knowledge. As part of the new oncology IPE day, a case-based group teaching session relevant for all professionals in attendance was introduced. We aim to evaluate whether this change was more acceptable to students and will also investigate whether this is able to enhance students’ understanding of interprofessional roles.

Methodology:
Students of different professions were required to work together to carry out a variety of tasks relating to a case of a patient with a new breast cancer diagnosis; conducting a multi-disciplinary team meeting, charting observations, handover and prescribing. The content was reviewed by faculty with backgrounds in clinical skills, oncology and IPE. An online feedback questionnaire using a combination of Likert scales and free text comment boxes has been used to evaluate students’ perceptions regarding the content and delivery of the oncology IPE case based session. To further evaluate students’ knowledge of the roles of an oncology multi-disciplinary team a pre-test and post-test will be introduced for the sessions taking place during the second semester.

Results:
Initial feedback indicates that 16/16 (100%) respondents agreed or strongly agreed that the content was appropriate. Likewise 100% respondents also indicated that audience participation and interaction was encouraged. Qualitative responses also indicated a positive response to interacting with students of different professions. Pre-test and post-test feedback will provide further insight at the time of the conference.

Discussion:
A new approach to IPE which places more emphasis on understanding professional roles and interactions between students of different professions appears to be welcomed by students. A pre-test and post-test could provide evidence that this, seemingly more acceptable approach to IPE, is successful in enhancing students’ knowledge of professional roles within an oncology team.

References:

Presentation Details: Thursday 4th July, 3.00-3.20pm, Boisdale 2
Background:
The Gosport War Memorial Hospital independent enquiry has revealed several factors that lead to the deaths of ~600 patients (1). Firstly, clinical practice was found to have been taking place within rigid hierarchical structures thus impeding any healthcare professional’s attempt to raise patient safety concerns for fear of ‘repercussions’ (1). Secondly, the poor communication between medical and nursing teams was also cited as having played a part (1). In response to this, the British Medical Association called for more inter-professional learning (IPL) events in order to address these highlighted issues (2). IPL has a role in developing a ‘patient safety climate’ within a clinical environment by improving the awareness of patient safety issues. (3) IPL can be used to provide training around how to raise concerns about patient safety, as the ability to speak up has been noted by students as being challenging. (4) Our project has been developed to explore whether IPL sessions on the subject of patient safety can encourage healthcare professionals to identify patient safety issues and communicate their concerns appropriately.

Methodology:
A total of 81 healthcare students and newly qualified professionals from 6 different backgrounds have been recruited to take part in 1 of 3 IPL sessions focusing on raising concerns around patient safety. Each participant will complete a pseudo-anonymised questionnaire utilising Likert scales around perceptions of IPL and patient safety. Participants will be divided into mini multidisciplinary teams of 4-5 students and will take part in a carousel of activities. These activities include: a hazard perception exercise where the team must identify all the patient safety issues on a ward, reviewing a serious untoward incident and considering why mistakes happen within a healthcare setting. Each of these activities will allow the in-depth exploration of patient safety issues as a team. The groups later reconvene for a lecture on communication tactics for raising safety concerns. They will then be given an opportunity to put their new skills into practice via role play scenarios. At the end of the session, the participants will complete the pseudo-anonymised questionnaire again. The results of the pre-& post-questionnaires shall be compared.

Results:
Based on the results from a small pilot session in November 2018, we anticipate that the participant’s will demonstrate an appetite for IPL which will increase by the end of the session along with the participant’s confidence in dealing with raising patient safety concerns.

Discussion:
The desired benefits of this project are considered in terms of the participants and the contribution to IPL research. With regards to the participants, it is hoped the activities will highlight that each healthcare professional views patient safety issues through a different lens and therefore each team member has a valuable contribution to offer. By addressing patient safety using a team approach may facilitate positive inter-professional working relationships which may reduce barriers to speaking up in the future. We also hope that discussing and practicing communication tools in order to escalate patient safety concerns will provide participants with essential skills for their future careers. We have ensured that our research complies with the CAIPE definition of IPL as professionals are learning ‘with, from and about each other’ (5). Therefore, we hope that our project should satisfy the BMA’s call to utilise IPL to ultimately improve patient safety by breaking down hierarchies and improving communication between healthcare professionals.

References:
2. Darbyshire, P & Thompson, D. Gosport must be a tipping point for professional hierarchies in healthcare. BMJ.2018.363(8173)
Undergraduate healthcare students need encouragement to use available ethics literature to help inform complex ethical deliberations.

L Corfield, M Stibbs, C Watkins, M Allinson
Keele University

Background:
In the 2017/8 academic year 421 undergraduate students (112 pharmacy, 120 nursing, 73 physiotherapy and 116 medicine) were enrolled on an on-line inter-professional education ethics exercise. This involved using a commercially available online decision support system (‘The Values Exchange’) requiring students to work individually through an ethical dilemma relevant to their future professional practice. The students were then divided into 38 interprofessional groups. The second part of the activity involved the group discussing the case and the ethics involved on a group-specific discussion board. The students were asked to upload or provide links to any material they felt would enhance or support the discussion. At the end of the 2 week discussion period, each group was asked to produce a written assignment as a team addressing the ethical decision-making behind their group’s decision on the case. The groups were specifically asked to list the resources they had used to guide the written assignment. The case given was that of a teenager with cystic fibrosis who died unexpectedly and in significant distress whilst her family were not available. Her parents later ask about her death and the students were asked to decide whether they would reveal the true distressing circumstances of her death.

Methodology:
The discussion board and written proforma for each group were reviewed retrospectively and the resources referred to by the students categorised. The analysis of this on-line interprofessional exercise was approved by the University of Keele Research Ethics Committee.

Results:
The most commonly cited resources were the professional codes of practice or profession guidance published by the relevant regulatory bodies. However, on the discussion board reference to the relevant professional guidance was far from universal. The General Medical Council [GMC] guidance was referred to by 26 students, General Pharmaceutical Council [GPhC] by 29 students, Chartered Society of Physiotherapy [CSP] by 16 students and the Nursing and Midwifery Council [NMC] by 14 students. Health and Care Professions Councils [HCPC] guidance was cited by 12 students. 19 students posted a total of 25 other resources on their discussion boards. 7 of these related to communication or breaking bad news, 7 to other guidelines (such as the NHS Code of Behaviour), 2 were academic articles on bereavement and 1 a healthcare professional’s story of her experience of lying to a patient. Only 8 resources directly concerned healthcare ethics (1 website, 1 book chapter and 6 articles). All groups submitted the required written assignment. 2 groups did not list any resources. The resource focus in the other 36 groups was clearly on professional guidance (the GMC was cited in 33 assignments, GPhC in 29, the CSP in 23, NMC in 22 and HCPC in 16). Only 9 groups had used a healthcare ethics article, book chapter or website to inform their written submission.

Discussion:
Even when given ‘carte blanche’ to share resources with student colleagues within an on-line discussion board, relatively few students uploaded resources. The main focus was on professional guidance (such as GMC guidance). The case was clearly labelled as an ethically complex scenario yet only 8 students actively used healthcare ethics literature as a resource. When the groups were specifically asked to cite their resources, most groups relied on professional guidance. Only 24% of groups used a healthcare ethics resource to support their written work. There may be many reasons for this low level of engagement with ethics resources. However, it would seem that students across all disciplines need more encouragement to use available ethics literature to expand and inform their ethical deliberations.

Presentation Details: Friday 5th July, 9.20-9.40am, Boisdale 2
Inter-Professional Education

Undergraduate interprofessional simulations: Taking a closer look
E Anderson, S Bennett
The University of Leicester

Background:
Simulation is a natural place for interprofessional learning (IPL) because it offers the opportunity for different professionals to combine their professional competence to safely resolve patient health care problems. However, with growing access to simulation suits, interprofessional undergraduate simulations are growing in popularity, but remain under researched and without pedagogic instruction. Following a curriculum theme of early classroom and later practice-based IPL, final year medical with other healthcare students took part in an interprofessional simulation on patient safety. The simulations were offered after a workshop on safe team working which covered, situational awareness, speaking up or empowerment, leadership and interprofessional communication. We report on the evaluation of this simulation event which took place between 2015-2017.

Methodology:
A mixed method study combining traditional evaluation methods with direct student observations. Students completed a pre and post-course questionnaire with scored questions on the learning outcomes with additional free text comments on the value of the learning. In addition an ethnographer observed the simulations, which were also video recorded. The quantitative data was analysed using SPSS. The qualitative comments were analysed using thematic analysis. The observational field notes were compared to the video recordings and the data combined to offer insights of the events as they unfolded in real time. The study received university ethical permission and only consenting students participated.

Results:
230 students (medical, nursing, Operating Department Practitioner, pharmacy) participated. The scored questions were significant (P<0.01) showing positive learning while the student comments confirmed the value of the simulations. The observations identified strengths and weaknesses. The students were professional and patient-centred, but were unable to function as a team, communicate effectively for shared decision making or recognise and highlight patient safety concerns. The medical students often took the lead and there was no clear agreement on roles and responsibilities. The students failed to stop unsafe clinical moments taking everything presented to them as accurate. The facilitators took on a leading role and failed to enable the students to find their voice as they guided proceedings; they were competent in de-briefing.

Discussion:
Despite a theme of interprofessional education (IPE) designed to develop team working abilities, final year healthcare students were unable to function as a student team. The findings highlight that students require to come to IP simulations having attained and rehearsed a range of competencies, for example, the use of communication tools such as SBAR, reflection in action, an ability to challenge others. Following our experiences we have drawn up a list of pre-requisites for the end of training IP simulations. Facilitators play a pivotal role and require training in IPE and should invest more in briefing leaving students to find their voice. The findings highlight the value of observational studies to identify pedagogical issues.

References:

Presentation Details: Friday 5th July, 9.40-10.00am, Boisdale 2
What is the hidden interprofessional curriculum through the eyes of medical students?
K Leedham-Green, A Knight, R Iedema
King’s College London

Background:
The greater part of a medical student’s education evolves in the clinical workplace rather than the lecture theatre, classroom or laboratory. It is in this context that their professional identity emerges (1): where they learn its tasks, vocabulary, and organising principles (2), and where role modelling and the construction of sociocultural norms occurs. Much of this learning happens behind closed doors, and is sometimes referred to as the informal or hidden curriculum (3) and there is concern about its influence on student development (4). Our aim is to shed a light on early workplace learning about interprofessional practices, as well as allowing health professionals to view their workplace practices through a ‘fresh pair of eyes’. With the current educational emphasis on complexity, preparedness for practice, patient safety and team-working it is necessary to evaluate and respond to what medical students are learning about interprofessional practices during their clinical placements.

Methodology:
We asked 400 students at one medical school to submit a short formative essay describing, evaluating and reflecting on their experiences of how healthcare professionals work together. Their experiences were derived from having spent one day each week throughout the academic year in primary care and one in secondary care, placed at one of 50 teaching GP practices and rotating between placements at four teaching hospitals. We consented 311 participants, and analysed a randomised selection of essays through both thematic and narrative approaches to create a ‘students-eye view’ of the hidden interprofessional curriculum. Saturation of data was achieved at 30 essays, a further 20 were analysed to confirm saturation and coding accuracy. Themes were derived through a process of iterative discussion using a Consensual Qualitative Analysis approach (5).

Results:
We identified four overarching themes: students’ (a) experiences of team tensions driven by the workplace environment; (b) observations of hierarchical and paternalistic behaviours and attitudes; (c) respect for team members’ ability to manage and mitigate tensions and problems, and (d) enthusiasm for quality improvement and system change. Students are able to identify the drivers of suboptimal practices including tribalism, hierarchies, structural issues at the interfaces between services, understaffing and workload, IT shortfalls, shifting teams and unfamiliarity with people and places. They describe and admire teams that are able to navigate these tensions successfully and show insights into how formal and informal collaborative practices impact on processes, patients and practitioners. After negative experiences, students expressed enthusiasm for quality improvement over disengagement or disillusionment, aiming to address the drivers of suboptimal practice. After more positive experiences they expressed a desire to spread helpful interprofessional practices across and between services and professions.

Discussion:
We demonstrate that students are able to question and criticise suboptimal practices, and express a desire to emulate examples of good practice, identifying the underlying drivers and making suggestions for improvement. The assignment itself has supported students in processing cognitive dissonance through active engagement rather than detached resignation. We mapped our findings onto a model proposed by Hafferty and colleagues (6) (p84) which emphasises the drivers and impacts of the hidden curriculum as targets for educational action. To mitigate the negative impacts and leverage the positive aspects of this hidden curriculum, we recommend that medical schools provide safe reflective spaces for students to criticise and reflect on interprofessional team behaviours; that they use students’ lived experiences as raw material for systems thinking and quality improvement; and that medical schools close the feedback loop to placement sites on behalf of students.

References:

Presentation Details: Friday 5th July, 10.00-10.20am, Boisdale 2
Debrief Encounters of the Third Kind: The role of third sector organisations in simulation debriefing
A Demetri, F Charlton, K Jones
University of Bristol

Background:
Medical school curricula often highlight the need to be aware of social issues which may have an impact on patients’ health (1). In The Swindon Academy, University of Bristol, we have developed simulations around social issues such as substance misuse, domestic violence & mental health in pregnancy. In recent years, the GMC have called for increased patient & lay person involvement and feedback in medical student teaching (2). In order to facilitate this, simulation sessions have been delivered with the aid of third sector organisations (charities) in the debriefings. The aim is to provide insight into these complex social issues from a different perspective to that of a healthcare professional & to enhance how students manage these situations. The aim of this study is to assess the effectiveness of involving third sector organisations in simulation debriefing.

Methodology:
This qualitative evaluation uses interview & written data to explore the richness of these encounters. Each cohort of students who undertake their obstetrics & gynaecology placement in Swindon takes part in a simulation session incorporating three social health issues that can occur within the specialty. These include domestic violence, substance misuse, & mental health issues. These simulations are observed by members of charities who then participate in the debriefing. The charities used are Swindon Women’s Aid & the Nelson Trust, who support victims of domestic violence & substance abuse, amongst other social issues. Students were asked about their previous exposure to charities at medical school. Additionally, students were asked whether they agreed with charities being involved in medical education. Qualitative student feedback has been collected asking what the charities added to the simulation & what they could offer that regular teaching methods could not. The charities involved were also interviewed regarding their perceptions of the simulation & debriefing and its value to the students and the charities.

Results:
To date, 21 students have participated in simulation with debriefing sessions involving charities. Only 3 / 21 students had previous teaching sessions with charities (3 sessions each). All of the students agree or strongly agree that charities should be involved in medical education. Qualitative feedback in the form of structured interviews has demonstrated positive results. Thematic analysis has shown that students identified how useful they have found a different none-clinical perspective in debriefing: ‘A lot of medical school teaching is very clinical so it’s useful to have a different perspective & they provide expert knowledge.’ The structured interviews with the charities have identified themes of potential positive impact on patient care: ‘If we can teach students how to interact with patients, know questions to ask, and become more trauma informed, it will make women safer’ Data collection and interviews are on-going and a full analysis will be presented when the 2018/2019 cohort of students (30 total) have completed the training in June 2019.

Discussion:
The use of charities to teach medical students appears to be an underdeveloped idea, with little to no research in the area. Generally, students have limited teaching from third sector organisations at medical school. Using charities to help with simulations offers a new & fresh approach to debriefing. Having experts from the third sector allows for wider perspectives of real life experience to be added to these discussions, getting the patient’s view across more effectively. Students value these interactions saying it offers a different dynamic to regular teaching & are open to more teaching from such organisations. Charities appreciate participating in debriefing, highlighting not only the value to the students, but also to the patients & charities. We hope these positive experiential findings will lead to greater participation of charities in debriefing for simulation & teaching of medical students.

References:

Presentation Details: Wednesday 3rd July, 4.50-5.10pm, Boisdale 2
Involving Patients in Post-Qualified Education of Trainee GPs
S Maqbool, R Green
University of Leicester

Background:
There are a plethora of education quality standards which seek to ensure the involvement of patients in curriculum design and delivery with particular note on giving feedback. However, it remains rare that patient are fully embraced in teaching design at both pre-registration and post-qualified levels and there are calls for further integration. Trainee GPs rarely have an opportunity to listen to the concerns real patients in a risk-free environment. This project set out to develop a co-produced workshop, academics and service users/carers for trainee GPs to explore what quality care means for users of primary care services.

Methodology:
The project used an established Patient and Carer Group who support teaching for learning in one medical school in the midlands. Together a teaching plan was designed, using participatory methods. A mixed-methods evaluation was conducted; i) qualitative data including focus group, one-to-one interviews with patients and trainees, and free text comments in a questionnaire; ii) quantitative data was obtained on a pre-post-test 5 point Likert scale on the expected learning outcomes.

Results:
17 patients supported a workshop involving 40 GP trainees. Of the questionnaires (75% response rate) demonstrated positive outcomes (P<0.01). Of the qualitative data the findings positively showed that trainees were pleased to converse with patients in a non-clinical environment, recognising the rarity of such conversations as they use simulated patients a great deal in their training and mainly for clinical diagnostic purposes; “It was very helpful to get a perspective from an actual patient”; “It’s important to have exposure to patients seeing their opinions...”. The workshop design was well received as most the trainees had time to reflect on the experiences of being a service recipient. Patients felt the workshop was a ‘good thing’, feeling ‘satisfaction’ from relaying personal experiences. They stressed the importance of influencing ‘the way in which GPs... will listen to patients’ so that GPs consider the patients ‘social environment’.

Discussion:
The pilot highlighted how reflective sessions with real patients were key in ensuring awareness of patient priorities and a focus for thinking about what quality service delivery means. Open conversations regarding healthcare tensions were valued by both patients and trainees. Overall, results show clear benefits for patient involvement in postgraduate medical training. Curriculum time and cost implications are barriers to be overcome.

References:
Providing a Patient Perspective: Patient Involvement in Miscarriage Simulation Debriefing
F Charlton, A Demetri, K Jones
University of Bristol - Swindon Academy

Background:
In recent years, there has been a steady increase in the involvement of patients in medical education in both teaching and assessment. Patients participating in OSCE examinations are now being asked to contribute towards marks awarded, for example regarding communication (1). This has been promoted by the General Medical Council who have called for ‘systems which give patients an opportunity to feed back on the quality of teaching, learning and assessment as well as individual students’ performance’ (2). We decided to introduce patient feedback into simulation debriefing at Swindon Academy. We chose specifically a miscarriage simulation, anticipating that the patient would be able to give personal insight and tailored feedback on the students’ ‘soft skills’. Our aim was to improve students’ confidence in communicating with a patient who had had a miscarriage and appreciate the psychosocial effects of miscarriage on patients.

Methodology:
We contacted the miscarriage association to help us to find a patient who had experienced a miscarriage and who would be willing to be involved with the simulation debrief. We then met with the patient and discussed the simulation scenario, expectations of the students and expectations of the patient. Two students at a time participated in the simulation with four other students observing. The scenario involved a simulated patient who had had a recent miscarriage and had been readmitted with retained products. The students were expected to manage the medical problem appropriately, whilst communicating empathetically with the patient. After the simulation a debriefing was held. This involved feedback from the patient (from the miscarriage association) on how the medical students handled the scenario. The students were also given the opportunity to ask the patient questions about communication regarding miscarriage, and about the patient’s personal experience of this. The students were asked to fill in a questionnaire to self-assess pre and post session knowledge and confidence using the Likert scale. Qualitative feedback was also collected from both the students and the patient.

Results:
Data is still being collected. To date, 12 students have participated in this project and we expect to have feedback from a total of 28 students by the end of the academic year. In qualitative feedback, students commented that it was valuable to ‘hear [the patient’s] experiences’, and that ‘it helped me to become more aware of my language’. Initial results show that 100% of students felt that it was valuable to have feedback from a patient who had been through a miscarriage. We also found that the students confidence in communicating with a patient who had had a miscarriage improved from 5.2 to 7.4. This was an increase of 2.3 +/- 1.0 (p value 0.001). Feedback from the patient was that the students were ‘very professional’, the ‘scenarios were very real’ and the patient felt that it would ‘make a massive difference for the patients that they will see’.

Discussion:
We hope that additional data throughout the year will confirm our initial findings that patient involvement in simulation debriefing is a valuable learning experience and improves student confidence in communicating with a patient going through a miscarriage.

References:
An evaluation of take-home laparoscopic simulation programmes in the UK and Ireland
V Blackhall, J Cleland, P Wilson, S Moug, K Walker
University of Aberdeen

**Background:**
Several regions in the UK and Ireland have delivered home-based laparoscopic simulation programmes in an attempt to progress surgical trainees’ skills through deliberate practice. However, engagement with these programmes has been poor (1). This ASME co-funded study aims to uncover the barriers to engagement with home-based simulation, with a view to developing better training.

**Methodology:**
This was a qualitative study. After obtaining ethics approvals, we carried out focus groups with key stakeholders (core surgical trainees, consultant laparoscopic surgeons, training programme directors and programme faculty) involved in the inception and delivery of four regional programmes across the UK and Ireland. The programmes were similar, each involving EoSim laparoscopic portable simulators paired with online training tasks which provided metric performance feedback. In some regions, an eCertificate was awarded to trainees upon completion of tasks which was designed to cue trainers to allow the trainee access to ‘first operator’ tasks in theatre. Focus groups were audio-recorded, transcribed and managed with NVivo. Analysis was data-driven and thematic.

**Results:**
Sixty-three individuals were interviewed in 12 focus groups (43 trainees, 20 trainers). Four main themes were identified: trainee motivation, provision of feedback, trainer involvement and the influence of surgical systems. Trainees cited competing commitments as a barrier to engaging with home-based simulation. They tended to focus on scoring ‘points’ towards career progression (rather than engaging with tasks for personal development). Their view was that this approach is perpetuated by the training system, which rewards some activities but not others. Trainees were unsatisfied with metric feedback, privileging individual feedback from consultants. Trainees perceived consultants as lacking interest in the programmes and toward training in general. However, some consultants were unaware of the programmes being delivered and others felt lacking in confidence to deliver the necessary training. In addition, some consultants were ostensibly skeptical about the simulation programmes. They preferred to work to their own model of training rather than relying upon the attainment of a certificate to signal readiness of the trainee to progress to live operating.

**Discussion:**
This study found that trainees did not engage with home-based simulation because they prioritise tasks linked to career progression rather than those which may improve their surgical skills. Providing trainees with scheduled simulation sessions coupled with consultant feedback may improve engagement. Promoting a shift from a ‘tick-box’ culture towards valuing the development of clinical excellence is more challenging, and is likely to require change at a systems level (e.g., modified assessment structures, greater recognition and accountability for trainers and simulation-based education). The findings of this study have informed the design and implementation of the Improving Surgical Training Pilot for Core Surgical Trainees in Scotland.

**References:**

*Presentation Details: Wednesday 3rd July, 3.30-3.50pm, Alsh 2*
Contextual factors that affect the development of clinical thinking in postgraduate medical education
R Locke, A Mason, C Coles, R Lusznat, M Masding
University of Winchester

Background:
Understanding clinical thinking and how it can best cultivated is a crucial issue because 55% of complaints to the General Medical Council concern clinical competence. Most current research focuses on the individual and the development of diagnostic skills. Currently we have limited knowledge about the contextual factors that serve to best develop clinical thinking amongst postgraduate medical trainees. The context in which a trainee learns is crucial to what is learnt and how it is learnt, demonstrating in particular that much of that learning is 'non-formal', that it happens quite naturally within the learner's everyday working environment, without any 'deliberate' education or training 'intervention' though it only does so if certain conditions apply - a culture that is supportive to learning and a managerial system that recognises the importance of reinforcing and sustaining that culture (1). From some observations of teaching of clinical thinking, those in three particular placements, namely general practice, emergency medicine and psychiatry, reported active engagement with their seniors regarding clinical thinking. We want to explore contextual factors further and find out about how foundation doctors acquire the capability to think appropriately so as to practise effectively in a clinical setting.

Methodology:
The study is qualitative with ontological assumptions that subjective meaning and interpretations of experiences help to create the reality and epistemological assumptions that knowledge is time-related and context-bound, and is 'constructed' by them and those they are with (2). This means for the researchers undertaking this work they: - search for understanding and the 'meaning' people make of their experience; - explore complex connections and 'inter-relationships'; and - seek in-depth descriptions from the people involved in the situations being researched. The research methods for this project follow directly from these methodological assumptions. Fifteen in-depth interviews have been undertaken with educators of foundation doctors and so far nine trainees have been interviewed about their experiences of the development of clinical thinking within general practice, emergency medicine and/or psychiatry. There are still more interviews with foundation doctors to be carried out (to be completed on 13th February 2019). Thematic analysis has commenced on the interview data using NVIVO to manage the analytic process and in the results/discussion section of the abstract, the preliminary findings are presented.

Results:
The preliminary findings are the importance of 'community' (of educators and of foundation doctors, as well as their workplaces), 'collegiality' ('we are still learning and we are learning together', 'we are fallible', 'it's about dealing with uncertainty') and 'criticality' ('we encourage trainees to look at their own practice as we look at our own', 'we discuss cases between ourselves', 'it's about risk').

Discussion:
Starting this research there were strong implications that emergency medicine, general practice and psychiatry are similar to one another but different to other clinical specialities. The findings raise the question as to whether this is too simplistic a view on the contextual factors that affect the development of clinical thinking. Rather one important factor is the mind-set of the people who work in these roles/fields that may be considered 'educational' in terms of ways of thinking and being. This is because not every emergency department would be the same, or GP practice. There is also strong evidence that educators are engaging in 'assessment' (of the trainees' level, of the complexity of cases, of the progress a trainee shows and how the patient responds), as well as 'teaching' (both direct and indirect, formative as well as summative feedback, encouraging reflection and self-critique) and 'learning' (for not just the trainees or the trainers but for the settings in which they are working.

References:
Doctors as apprentices - a novel clinical leadership and management apprenticeship for foundation doctors

B Kawai-Calderhead, R Christie
British Army and South Tees

Background:
Poor leadership and management (LM) training and skills leads to poor patient outcomes1-3. Foundation Year 1 doctors (FY1s) receive little exposure to clinical LM training before and after entering the workplace4 despite it’s importance5. FY1s feel unprepared for the LM challenges and associated physical and psychological pressures6, and find the transition from student stressful7 with 25% displaying pathological stress8. 20% of trainee doctors, and doctors that are trainers, are at burnout point9; clinicians at burnout are twice as likely to be involved in patient safety incidents10.

Methodology:
A clinical LM module was incorporated into the trust’s FY1 Induction programme which, in partnership with a Registered Apprenticeship Provider, was grown into a bespoke FY1 LM curriculum. Curricula mapping between the LM Apprenticeship Standard and FY1 Curriculum demonstrated a commonality of 70%; this paved the way for Foundation Leadership and Management (FLM), the UK’s first clinical LM Apprenticeship - a fully funded, sustainable and standardised programme. FLM comprises of 12 modules, over 13 months, which complements the FY1 clinical teaching programme. Delivered through ‘on-the-job’ Knowledge-to-Skills-to-Behaviours, the Knowledge is delivered through interactive workshops within existing skills’ days augmented by self-directed online learning resources. One-to-one sessions with a dedicated LM learning adviser reinforce the Knowledge base upon which Skills and Behaviours are coached and developed. Skills learnt through such workplace-based experiential learning are more effectively practised in the workplace11 whilst also promoting use of applied theory rather than purely conceptual12. Quality feedback, paramount to meaningful learning11, on LM skills is offered. The adviser, especially useful in triangulating feedback on FY1 behaviour and resilience in the workplace, has been woven into the support network provided by Educational and Clinical Supervisors, and Foundation Faculty. Final independent summative assessment, conducted by an external accredited assessor, comprises of a knowledge test, LM e-Portfolio appraisal and interviews. This leads to a nationally recognised Team Leader/Supervisor Apprenticeship certificate enabling Associate Membership of the Institute of Leadership and Management and/or the Chartered Management Institute.

Results:
Since 2016 FY1s (n = 124) rated their clinical LM ability during trust Induction through a questionnaire comprising of 14 statements adopting a likert scale. Questions are repeated periodically for comparison. Most recent figures state 73% feel prepared for the leadership and management challenges of practice (40% at Induction) and 71% feel confident in their abilities as a clinical leader and manager (21% at Induction). Of note: 27% feel their undergraduate curriculum has adequately prepared them for the LM challenges; 93% have found LM training useful; and 88% wish for LM training during FY1. The overwhelmingly positive freetext comments show that FY1s’ welcome FLM’s LM development, which instigates behavioural change, and the advisers’ regular holistic support. Detailed evaluation will occur on Cohort 1’s completion of FLM in February 2019; results will be available for the Conference.

Discussion:
FLM is the UK’s first FY1 clinical LM Apprenticeship. Whilst FY1s indicate that it develops their LM skills, detailed evaluation on Cohort 1’s course completion will yield further granularity. Cohort 2 is underway and Cohort 3 being planned. In addition to FLM a Ward Managers’ LM Apprenticeship was established and, through Apprenticeship funding, a trust LM Fellow post, the first of its kind, will start in August 2019. Recently trusts were encouraged to utilise their Apprenticeship funding13; there exists an opportunity for widespread adoption. These funded, sustainable and standardised LM Apprenticeship programmes would address the national LM issue which impacts on both patient safety and clinicians’ wellbeing.

References:
5. Rouhani, M.J. et al., UK Medical Students’ Perceptions, Attitudes, and Interest Toward Medical Leadership and Clinician Managers. Advances in Medical Education and Practice, 2018, 9;119-124.

Presentation Details: Wednesday 3rd July, 4.10-4.30pm, Alsh 2
Enabling deliberate practice: development of a web-based simulation of radiotherapy targeting providing rapid individualised feedback to Clinical Oncology trainees

S Duke, L Tan, G Eminowicz, E Park, H Wharrad, R Patel, G Doody
University of Nottingham

Background:
Deliberate practice improves clinical skills (1) but has not been applied to radiotherapy (RT) targeting - a critical aspect of RT (2) as errors have been associated with a 20% decrease in cancer survival (3). RT targeting involves clinicians drawing round the tumour and normal organs on cross-sectional imaging, a skill known as “contouring”. Numerous studies have demonstrated substantial inter-clinician variation in contouring (4). High-fidelity simulations for RT contouring are available (5) but exercises can take >1 hour to complete and rarely provide qualitative feedback on the significance of variations. “Mini-Contour” is a novel low fidelity (6) web-based contouring simulation. It was developed to allow rapid completion and repetition of learning exercises with immediate qualitative feedback to learners, enabling deliberate practice (7). The aim of this study was to explore the feasibility (time taken), acceptability (acceptance of interface and feedback), usability and usefulness (reported usefulness, performance gains) of Mini-Contour exercises for Clinical Oncology trainees.

Methodology:
12 learning exercises were delivered in each of 3 regional training workshops (80 trainees in total). The time taken for each exercise was recorded. Surveys were used to collect trainees’ clinical experience, pre and post-workshop confidence in contouring (1=not at all confident, 5=highly confident) and perceived usefulness of feedback (1=not at all useful, 5=very useful). A validated usability instrument - the system usability scale (SUS) - was also completed. For each exercise, trainees were assessed for successful contouring of 3-8 learning points (42 unique learning points in total, set by consensus of 3 faculty) for example including the lateral tumour extent or excluding the bladder. Learning points were re-tested on separate exercises during the workshop and in follow-up exercises provided 4 weeks later. Ethical approval for the study and written informed consent from all participants were obtained.

Results:
Time taken per exercise started at 5 mins (median); after 4 exercises it was consistently ≤3 minutes - this was maintained in the follow-up exercises. Median SUS score was 80 out of 100 (range 50-100). In general, trainees found the automated feedback very useful (median score 5, range 3-5). Confidence increased strongly with stage of training (Spearman’s r = 0.74, p<0.01) but correlated weakly with performance (Spearman’s r = 0.28, p<0.01). After the workshop, trainees’ confidence in contouring increased by 1.4 points on average (p<0.001) on immediate re-testing, while in the remaining 3 performance was within 10% of baseline. 38% of trainees completed the follow-up exercises. Of the 3 learning points where there was >30% improvement during the workshop, only 1 had a follow-up success rate >10% higher than baseline.

Discussion:
The weak relationship between confidence and performance is suggestive of the Dunning-Kruger effect(8) in this context and underlines the importance of external feedback (9) in developing expertise. In keeping with the literature on skill decay (10) a single repetition of learning points was insufficient for long-term retention. Measurement of performance may have been affected by confounding factors such as case difficulty and stringency of assessment. The Mini-Contour tool had a short learning curve and was highly acceptable to trainees. It enabled assessment of contouring across a broad range of exercises in a limited time and could form the core of a RT contouring deliberate practice programme if paired with effective pedagogy. Further work will explore assessment validity (11) including performance of consultants/experts, and spaced testing (12).

References:

Presentation Details: Wednesday 3rd July, 4.30-4.50pm, Alsh 2
Gender in Surgery: Exploring the identity formation of female surgeons' in longitudinal biographical narratives  
G Offiah, S Cable, C Rees, S Schofield  
University of Dundee

Background:  
Surgery has always been perceived as a ‘boy’s club’ 1. The healthcare workforce potentially faces substantial challenges in a few years if this trend of fewer women pursuing surgery continues. It is known that there are a significant number of women in the graduating classes from medicine and yet this is not represented at the higher levels in surgery. The numbers of women represented in surgery universally, at consultant level remain low compared to the number of female medical graduates. This low representation of females in surgery is demonstrated across all surgical subspecialties and is a universal issue. In 2002, a study in the United States showed that women comprised of only 14% of tenured faculty and 12% of full professors 2. Three years later in 2005, a study in the United Kingdom found the number of women consultant surgeons was less than 7% in general surgery and 2.87% in trauma and orthopaedics 3,4,5. Nine years later, Moberly (2014) found this had risen to 11% and 5% respectively 6. In Ireland, in 2009, there were fewer than 7% of female consultants in surgery 7. Nearly 7 years later, a report published in 2016 by the Irish Medical Council on workforce intelligence showed the same figure of just over 7% of consultants being female 8. The overarching aim of this research study was to explore stakeholders' experiences and perceptions of gender in surgery and thereby gain insight into the challenges of retention in surgery especially for women.

Methodology:  
A qualitative research approach was used to provide a comprehensive picture of the underlying issues for female surgeons as it emphasises the socially constructed nature of reality and thus a rich and complex understanding of people’s experiences. A biographical narrative interview method was employed with 60 female surgeons, colleagues and patients to collect narratives of gender issues in surgery. Thematic framework analysis was used to identify initial key themes for coding from the data.

Results:  
The overarching themes identified were of surgical culture, career choices and career interruptions and identity. Noting the prominence of identity in the female surgeons’ narratives, we explored this theme further using secondary analysis, identifying intersectionality between being a female surgeon and other personal identities. Participants experienced several identities as surgeons. These included personal, racial and ethnic identities, as well as gender and professional identities. There were intersecting identities described throughout.

Discussion:  
Study by Hill et al in 2015, showed that there is little discursive space to be both a successful woman and a successful surgeon. And those that achieve it have created a new space, a powerful discursive process termed ‘world making’ 9. However, novel findings from our study highlight how participants narrated their intersecting personal and professional identities within the different gender specific contexts.

References:

Presentation Details: Wednesday 3rd July, 4.50-5.10pm, Alsh 2
Getting Under the Skin of GP Trainee Supervision
D Jackson, I Davison, J Brady
University of Birmingham

Background:
It has been argued that the clinical supervisory relationship is the “single most important factor in the effectiveness of supervision” (1, 2). Akin to the ‘therapeutic alliance’ between a client and their therapist, the ‘educational alliance’ between a trainee and their supervisor is considered as fundamental to the trainee’s progression and development (3, 4). However, it is less clear from the literature how the trainee contributes to this alliance, or the way in which such relationships are developed and maintained (5). Using the concept of ‘Figured Worlds’, this research considers how GP trainees make sense of the cultural, social and institutional influences at work within GP supervision, as they develop their professional identities within these relationships (6).

Methodology:
Narrative interviews were undertaken with 13 GP trainees in the West Midlands by a single researcher (DJ), and transcribed verbatim. Trainees were invited to tell their stories of supervision, setting the agenda and content of the narrative. Analysis using the Voice Centred Relational Approach was undertaken, attending to different ‘voices’ within the narrative with each of the four readings; ‘who’ is telling what story’, (incorporating the researcher’s positionality) ‘I-poems’, ‘relationships with others’ and the ‘socio-cultural influence’. The ‘I-poem’ element involves highlighting statements prefixed by ‘I’ within the narrative, and arranging in stanzas to highlight aspects of perceived self and identity. The approach offers different ‘windows’ into the Figured World of General Practice supervision through the eyes of each GP trainee (6, 7).

Results:
To exemplify this method of analysis, data from two narrative interviews will be presented, and themes across all 13 narratives will also be considered. For one trainee, an International Medical Graduate experiencing difficulty in her training, two voices predominate: the ‘defensive’, and the ‘vulnerable’. The trainee appears positioned as ‘peripheral’ to the community of practice, and their expectations of their supervisor are influenced by this peripheral perspective. The training system (with the supervisor seen as an agent of this) is viewed with suspicion, and placed as an antagonist within the story. Throughout, the trainee appears to be seeking acceptance and ‘insider’ status within the practice, but it is suggested that this is denied. A move of practice brings a sense of increasing ‘insider’ status, and a change of vantage point. In the second story, from a male trainee who has excelled in his training, a near-peer supervisory relationship is described, with ease of access and a strong sense of agency within his training. However, the narrative also illuminates constraining institutional factors of monitoring and assessment, which appear to threaten the near-peer interaction. Across the 13 narratives, themes such as positionality, access, agency, identity and artefacts are considered, with variation in the trainee experiences identified.

Discussion:
Considering positionality within supervision relates to Lave and Wenger’s notion of legitimate participation within the community of practice (8). In both narratives, the trainees outline their own professional journeys from novice observers towards autonomous practitioners, with the aim of participating more legitimately, and more fully, in the life of the practice. However, it appears that the degree of access afforded to the trainee, both to their supervisor and to relationships within the wider practice, influences their position, participation and viewpoint. Furthermore, the institutional influence of assessment and monitoring appears to act as a ‘didactic caretaker’, deterring trainee and supervisor motivation from pursuing full participation towards ‘hurdle jumping’, which may further threaten legitimate participation. Such an understanding provides an opportunity to consider why some training relationships may suffer, whilst others flourish.

References:
2. p827
It's not what you know, it's who you know: a social capital and social network perspective on the value of a higher qualification in clinical education
C O’Callaghan, J Sandars, C Sherratt, J Brown
Edge Hill University

Background:
The number of institutions offering a Master’s in Clinical or Medical Education has dramatically increased in the past 2 decades (1), but there is little research about the value of these courses. This innovative study moves beyond the widely used Kirkpatrick’s Model (2) for the evaluation of training and adopts the theoretical perspective of social capital (SC). The importance of how an individual obtains value through social relationships is fundamental to SC theory and these relationships can be identified through social network analysis (SNA). The aim of this ongoing PhD research, with data collection to be completed summer 2019, is to understand the value of undertaking a higher qualification in clinical education in terms of the social capital of graduates as it relates to their work as a medical educator.

Methodology:
A series of individual case studies of doctors who have obtained a PGDip or MA in clinical education at Edge Hill University and who are in personal contact with the programme lead. A cross-case synthesis identifies similarities and differences across the cases. SNA with a parallel, mixed-methods approach is used (3), with the majority of the data being qualitative in nature. Data is collected through completion of a word document and spreadsheet and a semi-structured interview. Qualitative and quantitative data are analysed separately and then brought together for the purposes of interpretation and theory formation.

Results:
Individual networks spanned multiple organisations and people, with most networks being related to formal job roles. Only one participant maintained peer group contact and this was of short duration. The knowledge and skills gained on the MA programme enhanced the participants’ confidence and sense of credibility as a medical educator, which led to more positive interactions with others and changes in job roles. Individuals identified on-going contact with faculty from the programme as important to maintaining currency of knowledge and enhancing their reputation as an educator.

Discussion:
The findings highlight the importance of an ongoing relationship with university faculty, with enhanced individual social capital through access to resources that their other contacts did not have. Previous research has not identified this important relationship. Themes of confidence and credibility affecting social interactions resonate with Moses et al’s (4) social network analysis of US medical educators participating in a ‘Teaching Scholars Programme’ and Sethi’s (5) thematic analysis of postgraduate medical education qualifications, demonstrating generalisability of the findings.

References:

Presentation Details: Friday 5th July, 9.00-9.20am, Alsh 2
Medical Student preferences and perceptions of a career in general practice: do they vary depending on whether they have a GP in the family?
R Darnton, E Massou, J Brimicombe
University of Cambridge

Background:
The UK National Health Service (NHS) relies heavily on patient access to high quality family medicine (which in the UK is called general practice). There is currently insufficient recruitment of UK medical graduates into general practice training to meet the workforce needs of the NHS. Consequently, there is an imperative for UK medical schools to produce sufficient doctors who go on to choose a career in general practice. Recent surveys of foundation year doctors show that those who were medical students at the University of Cambridge are much less likely to choose a career in general practice compared to junior doctors who graduated from other UK medical schools. The relative lack of uptake for a career in general practice from Cambridge medical students, makes them a useful group in which to research career preferences and perceptions in relation to general practice. Motivated by the low rate of uptake of GP careers by Cambridge medical students in an institution famous for world class medical research, a longitudinal cohort study has been commenced. As part of this study, we intend to identify how Cambridge medical students who have a general practitioner in the family vary from those who do not in terms of their perceptions and preferences regarding careers in general practice.

Methodology:
A longitudinal survey of Cambridge medical students has commenced which will intermittently questionnaire students who started the course this academic year (October 2018). This survey includes questions that measure their perceptions of GP careers and their perceived likelihood to choose a career in general practice. The survey also collects self-reported data on potential career influences, including whether or not the respondent has a close family relative who is a GP. Descriptive statistics and logistic regression analysis is used to explore associations as described below.

Results:
The first round of data collection for this cohort is currently in progress, completing by February 2019. Quantitative analysis of this first round of data collection will be presented with regards to to whether students with a GP in their family differ from those without in terms of their self reported likelihood to choose a career in general practice and with regard to what extent they perceive general practice to possess the following attributes: opportunities for leadership; intellectual stimulation; team working; prestige; favourable hours; scientifically based; opportunities for innovation; flexibility; academic opportunities. Response rate so far has yielded an acceptable sample size for both groups.

Discussion:
It is expected the data analysis will shed light on the extent to which having a close relative who is a GP is an influencing factor in perceptions of medical careers and preferences for or against a career in general practice. From October 2019, a further study comparing these findings with those from a UK medical school with a high rate of students entering a career in general practice is likely to follow.

Presentation Details: Friday 5th July, 9.20-9.40am, Alsh 2
Mental Health Life Support (MHLS): An innovative training programme to improve psychiatric competencies of Foundation doctors

L Thoms, S Samad, A Boyle
Leicestershire Partnership NHS Trust

Background:
In recent years, the NHS has reformed to take greater account of the interplay between mental and physical illness, with increased efforts to better manage mental illness in community and acute healthcare settings. With greater planned integration of services according to the NHS Long Term Plan (1), doctors will need to be prepared and adequately skilled in the provision of safe and effective mental healthcare. The UK Foundation Programme is a two-year programme of broad-based clinical training for newly qualified doctors, ensuring progression to specialty training with generic skills and professional competencies (2). As it is currently not feasible for all Foundation doctors to complete a psychiatry post, it is imperative that all have a meaningful learning experience in mental healthcare. At present, there are no consistent learning opportunities in the UK to deliver this learning. This project evaluates an innovative learning programme, Mental Health Life Support (MHLS), which has been developed to meet this need. The programme aims to equip Foundation doctors with a general level of psychiatric competency, transferrable across specialities, focusing on the assessment and management of mental health crises and cognitive impairment.

Methodology:
The programme comprises separate learning packages for each Foundation year with a focus on dementia care in Foundation Year 1 (FY1) and acute mental illness, including deliberate self-harm, in Foundation Year 2 (FY2). Learning outcomes have been developed with overarching themes of mental capacity and risk assessment and management. The programme provides a two-year experiential learning opportunity in mental health comprised of both didactic learning and simulation, followed by clinical experiential opportunities. The evaluation is of a longitudinal, prospective design. It spans twelve months, starting from August 2018. Using qualitative methodology, the evaluation is based on Kirkpatrick’s (3) four-level model of training evaluation. Data collection methods utilised include: 1) pre-and post-teaching knowledge questionnaire, 2) pre- and post-programme concept mapping, and 3) semi-structured interviews. Recruitment of Foundation doctors and faculty staff is opportunistic, based on voluntary participation.

Results:
To date, the MHLS programme has been delivered to Foundation doctors in four NHS Trusts across two Foundation Schools in the East Midlands. Preliminary results from the first of three cohorts of doctors are promising, with high levels of satisfaction as well as demonstrable increased knowledge and self-reported confidence in clinical assessment. There is also a collective shift in the concept of clinical risk, which is more holistic and person-centred. Most respondents would recommend the programme to fellow Foundation doctors working outside Psychiatry, appreciating the relevance to other specialties. Further data will be collected and analysed to inform the evaluation, which will be completed in Summer 2019.

Discussion:
These early results demonstrate that the MHLS programme contributes to broader psychiatric knowledge, competency and confidence among Foundation doctors. This pilot programme will inform the ongoing review of the Foundation Programme and the future development of a stand-alone training package for Foundation doctors across the UK. Aiming to improve mental health literacy and enable doctors to enact parity of esteem, this programme will contribute to the medical workforce transformation required to deliver integrated physical and mental healthcare.

References:
(2) UK Foundation Programme. 2 Year Foundation Programme. Available from: http://www.foundation programme.nhs.uk/content/2-year-foundation-programme [Accessed 13th January 2019].
Teaching the Management of Trauma Patients: The Development of Virtual Reality Fully Immersive Interactive Technology Teaching
L Hainsworth, S Kiddle, A Kosti, A Lloyd, I Hunter
University of Bristol

Background:
The management of multiply injured patients is an essential aspect of your role as a doctor when working within the emergency department and surgical specialties. However, Foundation Trainees often have limited prior exposure to this area during their undergraduate curriculum. Furthermore, trauma calls occur at unpredictable times making it challenging to organise medical education. Recognising that this was an area where foundation trainee understanding and skills are likely to be poor, we sought to develop an education resource. To better prepare the junior doctors for these circumstances and ultimately, improve patient safety. We have created and developed Virtual Reality Fully Immersive Interactive Technology Teaching (VR FITT). This is an innovative teaching method using high definition 360 degree cameras to recorded innovative simulations. These are further enhanced and made interactive with the use of hot spots, information points and questions. Learners use their smartphones as virtual reality headsets to immerse themselves within the interactive scenario, getting immediate feedback on their patient management as they progress. The aim of this research is to compare the performance of Foundation Trainees in managing a trauma patient in those undergoing standard teaching vs VR FITT.

Methodology:
14 Foundation Doctors were randomised into two groups. One group underwent standard departmental teaching of tutorials, and simulations. The second group underwent the same departmental teaching and VR FITT. They were given access to VR FITT via an app and were able to access this at any time at their own discretion. Both groups subsequently underwent an assessed trauma simulation in which we compared time to complete tasks. These tasks included: decision to undertake primary assessment, C-spine immobilisation, IV access, IV fluids, pelvic binder application, activation of the major haemorrhage protocol and transfer to theatre.

Results:
Both groups undertook the scenarios with significantly differing performance. The VR FITT group were able to complete each task on average 1 minute 58 seconds faster than the standard group. Most noticeably the standard teaching group took 5 minutes and 15 seconds to give fluids in comparison to 2 minutes for the VR FITT group. Along with this the standard group missed essential tasks such as C-spine immobilisation and prescribing blood products whereas no tasks were missed in the VR FITT group.

Discussion:
The development of VR FITT has shown to significantly improve foundation doctor understanding and performance within managing trauma patients and has potential wide ranging benefits across postgraduate education.

Presentation Details: Friday 5th July, 10.00-10.20am, Alsh 2
There Ain't No Party Like a Lap Box Party - an independent observation into social gatherings as a means to improve engagement with the laparoscopic surgical trainer.

L Huppler, L Newton, R Bamford, P Orchard
Musgrove Park Hospital

Background:
Surgical trainees in the Severn Deanery are given an at home laparoscopic trainer (‘Lap Box’) with online curriculum and assessments to use in their own time to improve laparoscopic skills. Lap Boxes are known to improve laparoscopic skills over learning in theatre alone, however uptake of this opportunity by trainees can be poor. The aim of this observation was to investigate whether use of the Lap Box by trainees via social gatherings improved engagement.

Methodology:
A cohort of trainees were offered the opportunity to partake in a ‘Lap Box Party’ - a group meeting informally in a non-clinical environment to utilise the Lap Box. An Independent Observer hosted the educational event, and documented trainees interactions, communication and outcomes. Data was also collected on Lap Box party attendee times for each exercise submitted and frequency of Lap Box use before and after the party. This was to be compared with trainees who didn’t attend the Lap Box Party.

Results:
There was variation in ability prior to the party. Motivational and encouraging communication was observed and trainees shared technique tips and gave effective feedback. Trainees commented on how much more enjoyable and beneficial it was to undertake the Lap Box trainer tasks as a group rather than individually. During the event, trainee timings for each exercise improved and reported improved individual engagement with the programme at home prior to the next “Lap Box Party” event.

Discussion:
The Lap Box gives all trainees an opportunity to engage in laparoscopic skills training regardless of learning style. The observed environment supported social learning theories and constructivist learning style. Social gathering is an effective way of increasing multiple trainee engagement, team work, and ultimately completion of the Lap Box surgical trainer.

References:

Presentation Details: Friday 5th July, 10.20-10.40am, Alsh 2
Improving Medical Student Preparedness for Practice in line with the General Medical Council’s Outcomes for Graduates: A Pilot Study
L Baxter, A Moxley, P White
South Tyneside District Hospital

Background:
The 2018 Outcomes for Graduates (1) highlights non-technical skills as an important part of what should be expected of an F1 Doctor. However, studies show that medical school graduates have a relative weakness in these areas (2,3,4). There is a growing body of evidence for simulation as a learning tool in recent years (5), however, greater benefits are observed when simulation environment aligns with clinical practice (6). Studies have experimented with applying simulation to non-technical skills (7,8,9) with great success, however application of prolonged and repeated simulation to non-technical skills in medical students has not been studied in detail.

Methodology:
Each student was asked to self assess confidence for the 8 outcomes from Outcomes for Graduates domain 9b (1) on their first day placed at South Tyneside District Hospital. They will then be asked to further assess after each intervention designed to meet these outcomes; at the end of Preparation for Practice Module, at the end of their assistantship on the wards, and following a simulated ‘Day in the Life of an F1’ session (10). This will allow comparison of which interventions most helped achieve each outcome and whether the combination has allowed all students to increase in confidence for all outcomes. The Preparation for Practice module involves a prolonged (three week) low fidelity simulation in the form of a virtual ward, and the ’Day in the Life’ session is a high fidelity immersive simulation. This will allow us to also compare simulation to clinical experience as a method to improve final year preparedness for practice. Structured interviews will be conducted on completion of the self assessment survey to gain further qualitative information to help identify reasons behind student’s scoring at each stage. Students completed the low fidelity virtual ward simulation in December 2018 and are due to complete their assistantship and ‘Day in the Life’ simulations from January to March 2019.

Results:
The results from the low fidelity Preparation for Practice block in December 2018 have been encouraging. We saw an increase of confidence in all of the 8 outcomes from Outcomes for Graduates 9b, with the mean confidence increase across all 8 outcomes being 44.5%. One student reported a 250% increase in their confidence for one particular outcome. The results for further points of questioning regarding their confidence in the outcomes is pending. We hope to observe further increases in confidence at each stage and compare the difference in increase between simulated interventions and clinical experience. Structured interviews will allow us to explore why some interventions were perceived to increase confidence more than others.

Discussion:
Our findings so far suggest that students have engaged deeply with the subject material and feel equipped to put lessons learnt into practice in the ward environment over the next few months. It appears that further innovation and research could explore this method of framing educational courses to improve students’ understanding and ability in the skills and attributes required for clinical practice, in particular non-technical skills. We hope this study will provide evidence that specifically targeting these areas significantly improves student self-assessed preparedness for practice against Outcomes for Graduates and encourage further work and study in this domain.

References:
Mindfulness Based Cognitive Skill Training for Health Professionals in Training (MBCT-HIT)
F Ruths, F Turner, V Fernando, M Maroney
South London and Maudsley NHS Foundation Trust

Background:
A total number of staff of about 60,000 professionals provide health care for South London. Morale among health professionals in training (HITs) is at an all-time low. The need for maximum efficiency in the UK’s National Health Service (NHS) leaves health trainees working under conditions of heightened stress and pressure. There is an urgent need to open new ways of enhancing the sense of resilience, meaning and purpose under these circumstances. Mindfulness Based Interventions (MBI) have over many years successfully been used to improve the quality of experience for members of many different professional groups, including mental health professionals (Ruths at al. 2012), trainee doctors, therapists and associated health professions (e.g. Shapiro et al 1998). There is compelling evidence that MBI reduce anxiety and depression and enhance psychological well-being across clinical groups with mental and physical disorders. Mindfulness Based educational programs have been used for medical training and postgraduate training in programs worldwide, (e.g. Epstein 2017, Hassock 2015), over the last 15-20 years. We developed and implemented an 8-session group program for resilience building, increase in the sense of purpose and meaning, as well as reduction of psychological stress for health professionals in training. This program was developed, tested, and will be implemented over the last 24 months.

Methodology:
An MBCT HIT intervention manual was designed and targeted psycho-educational, behavioural and schema-based modules for, among others, prevention of burnout and resilience building. Educational modules were combined with specific meditation exercises. Quantitative Outcome measures, included measures of quality of life (Euroquol), self-compassion (SCS SF), mindfulness (FFMQ SF), resilience (Brief Resilience Scale BRS) and psychological distress (CORE SF), as well as qualitative interviews during and after the intervention. A Pilot Group of 35 junior doctors started an 8-week program with eight 2-hour sessions Each session had a similar overall structure: this included a longer formal medication practice, feedback from home practice, the introduction of the concepts and evidence for a new sessional theme, group discussions, shorter mindfulness exercises and the setting of home practice options. Themes addressed in the manual included Mindfulness-based interventions and the scientific evidence for MBIs, Emotions, their classifications and their representation in the body, present moment awareness as a skill that can help become more awareness. Psychoeducation also included worry to prevent Harm; Burn-Out; Empathy, Compassion, and Core Emotional Needs. A session on Dying, Life, as considerations of human vulnerability and a summary of what has been learnt rounded up the program.

Results:
Quantitative pilot group results: Self-Compassion Pre-MBCT-HIT and post-MBCT-HIT scores for the total SCS-SF analysed with matched pairs t tests (N=17) showed an overall significant improvement Mindful Awareness for the total FFMQ-SF and subscales analysed with matched pairs t tests showed an improvement of the facets of describing, acting with awareness, being non-judgemental and non-reactive Resilience as measured by the BRS score showed that there was a significant increase in brief resilience scale score at post MBCT-HIT. Overall Psychological Well Being for the CORE-10 score improved significantly.

Discussion:
This program was designed as a pilot to develop, test and fine-tune a manual of Mindfulness Based Cognitive Skill Training for Health Professionals in Training (MBCT-HIT). It served as a study of feasibility. Although the evidence so far is preliminary, we think that a degree of immersion in MBI, in combination with the validating effect of a peer-group experience, is critical for the effectiveness of MBIs in health professionals in training to improve overall self-compassion, mindful awareness and mental well-being as well as resilience.

References:

Presentation Details: Friday 5th July, 9.20-9.40am, Dochart 2
Rock, Paper, Scissors, OK? An infographic improving Clinical Practice
S Edwards
Emergency Department Ysbyty Gwynedd, Betsi Cadwaladr University Health Board and Emergency Department and EM3, Leicester Royal Infirmary, Universities Hospitals Leicester

Background:
It is estimated that upper limb fractures (ULF) account for over 80% of all paediatric fractures presenting to the emergency department (ED) 1,2. Assessing upper limb neurology (ULN) in children can be difficult. The 2015 national guidelines from BOAST (British Orthopaedic Association Standards for Trauma) suggested that each nerve should be individually documented for supracondylar fractures 3. Davidson (4) in 2003 developed a novel way using the children’s game Rock, Paper, Scissors (RPS) to help assess ULN in children. Following a near miss of a radial nerve injury in a child who presented to our Emergency Department (ED), a review of ULF documentation found only 75% of patients were having this documented in February 2018. Subsequently, a new approach on preventing a further miss was needed. A simple infographic based around the RPS method was designed. An OK was added to the original RPS, to cover all four nerves that need to be assessed. An infographic is a visual representation of information or data 5,6. An infographic was chosen as a way to do this because they are often viewed as exciting way to help people visualise information, in a concise and colourful manner 7,8. Evidence is beginning to find that infographics due to their graphic format enhances our understanding and ability to make decisions 7,8.

Methodology:
The rock, paper, scissors, ok (RPSOK) infographic was placed around the minor’s area of the department. It was explained at the monthly meeting and shared on the department’s Facebook page. After implementation of the RPSOK infographic, the department’s compliance for documentation was reassessed. A staff evaluation was then conducted to see how and if the RPSOK had influenced their clinical practice.

Results:
In February 2018, only 75% of children who presented with an ULI were having their ULN documented. The infographic was implemented in April 2018. In May 2018 documentation rates of ULN reached 90%, with it reaching 99% in August 2018. All the emergency nurse practitioners (ENPs) who work in the minor’s area responded to the evaluation around the RPSOK infographic. Only 37% of ENPs had heard of the RPSOK method of assessing ULN prior to its implementation. 100% of ENPs felt it had benefited their clinical practice. When asked about the infographic and how it specifically helped them, comments included “excellent learning tool”, “easy to understand, and implement with ease” and “this has really helped me be more specific about documenting the function”.

Discussion:
There has been an ever increase use of infographics in the use of medicine from displaying complex ideas to patients in a visually appealing ways, to helping clinicians assimilate the results of clinical trials more easily 5,6. What has not been shown is if an infographic can change clinical practice. This early work suggests that the RPSOK infographic has influenced the clinical practice of these ENPs in our department. Whilst this is one piece of work, in a small ED this educational work merits further work. The medical educational benefits of infographic changing clinical practice do warrant further work. Especially with increasing demand, and probably decreasing education time.

References:
Practice Based Teaching And Learning

Viewing near peer teaching in general practice through a sociomaterial lens
L Pope, S Jamieson, J Morrison
University of Glasgow

Background:
Nationally, there is a need to increase recruitment to General Practice (1). There are a number of initiatives trying to address this (2-4). The majority of these focus on a single level of learner within the continuum of medical education, despite the frequent co-location of multilevel learners. This unilevel approach is commonly reflected in the medical education literature. Recent evidence suggests that students struggle to appreciate what the daily work of a GP entails (1) with a suggestion that the complexity of GP work can be daunting (5). Authentic placements in GP are key to developing students understanding (5) and usually led by experienced GPs. However, there is unprecedented clinical demands on GPs (6) which can create tension between teaching and service delivery (7). This necessitates development of new models of teaching delivery and formal NPT is one such model. Several UK studies suggest that Near Peer Teaching (NPT) in GP is underutilised, with the existence of only a small number of local initiatives to support this (8,9). In one study, 80% of trainees involved in teaching reported organising this themselves, rather than teaching being formally organised by their practice (10). Teaching is a curriculum requirement for both GPSTs and FY doctors and the majority of trainees are keen to teach and interested in future teaching roles (9,10). A limitation of exiting literature is that it focuses on teachers and learners perceptions of and enthusiasm for NPT with minimal linkage to educational theory. Therefore, this work builds on understanding of this aspect of workplace learning through its use of a sociomaterial methodological approach.

Methodology:
Qualitative and quantitative data will be presented from a larger piece of work leading to a doctoral thesis. A survey of 180 GP teachers was conducted (RR=60%) and 17 semi-structured interviews. A combination of activity systems analysis and thematic analysis was used for interview analysis.

Results:
This study explored the reality of a continuum approach to medical education in general practice, building on existing knowledge of near peer teaching in this context. While previous studies focused on teachers' and learners' perceptions of near peer teaching, utilising a sociomaterial approach identified organisational, attitudinal and pragmatic barriers to expanding NPT in general practice. These findings suggested potential organizational origins of these barriers and identified the resultant tensions experienced in the learning environment.

Discussion:
At a time when near peer teaching in general practice is being actively promoted, this work takes a theory based approach to enhancing understanding of the educational and workplace benefits and challenges of developing this further.

References:

Presentation Details: Friday 5th July, 10.00-10.20am, Dochart 2
Becoming a GP Trainer - the Barriers and Enablers
K McConville
University of Dundee / Open University

Background:
The focus of this research concerns itself with the identity development of the general practitioner (GP) as a teacher (trainer). It aims to concentrate on teacher development and professional learning by exploring the professional identity (PI) formation that emerges when a GP chooses to become a GP trainer. The key research question being asked is what are the barriers and enablers that facilitate a General Practitioner becoming a GP trainer.

Methodology:
I have adopted an interpretive, naturalistic method of enquiry, theorising the professional identity formation of the GP trainer within a bounded system and conducted a qualitative case study (1) situated within the world of Symbolic Interactionism (2). From the review of the literature, I aimed to develop a theoretical framework incorporating the history of the GP trainer (3), professional identity formation of the medical educator (4) and of the teacher (5). The main research method I employed was the semi-structured interview with a view to combining this with policy analysis respective to GP trainer development. As a GP trainer/researcher I was able to draw on my experience of GP trainer development to consider both the importance of reflexivity and my own voice towards this work. Ethics was granted via the Open University, this research being part of an educational doctoral process.

Results:
After initial pilot work, a total of 16 GP trainers within one bounded geographical system of a Scottish Deanery were interviewed. This was combined with policy and documentary analysis. Applying a thematic analysis adopting a Braun and Clark (6) approach several significant themes were noted. Those of significance included: time as a barrier for the GP and GP trainer, the use of an apprenticeship model, the need to role model and feelings of nurturing towards the trainee. The need to be a teacher, the practice and its culture/environment and the characteristics of the GP as being 'understated' have also arisen as significant influencing factors.

Discussion:
The themes as relevant to the literature, more specifically that of professional identity formation via Symbolic Interactionism and Identity Theory will be discussed. Future recommendations for the future of the GP trainer including considerations for policy and practice will be highlighted.

References:

Presentation Details: Wednesday 3rd July, 3.30-3.50pm, Dochart 2
Capturing undergraduate medical student lecture attendance: are students more willing to lie online?

P Tayler-Hunt, R Hearn
King's College London

Background:
Higher education student lecture attendance rates have been reported by authors such as Thatcher et. al [1] to be “moderately (but significantly) related to academic performance and attending lectures regularly is the best indicator of academic performance”. Lectures remain an economical means of exposing students to new content, aid in developing critical thinking and offer opposing points of view [2]. There is a substantial body of evidence reporting the ubiquity of online deception [3] and Poole [4] found that adolescents and young adults viewed some forms of antisocial conduct online as being more acceptable than in face-to-face interactions. This study explores the willingness of medical students to falsify their attendance when it was recorded through online self-registration, and contrasts this with extant research on capturing student attendance through physical registers.

Methodology:
Lecture attendance for a compulsory module was captured via a series of SurveyMonkey polls, with the link shared with students on a slide at the end of each period of teaching. The survey remained open until 15 minutes after the end of the session. The number of respondents to the survey who reported to have been in attendance for the teaching was then compared to the number of students present in the lecture, based on a headcount. Following awareness of the discrepancies between these numbers, students were reminded of their responsibilities to attend teaching, and attendance was captured via the same means for subsequent lectures.

Results:
The year group comprises 373 students. Physical attendance ranged from 40 - 300 students over the taught section of the course. The number of students who registered online as having attended ranged from 150 - 290. For some sessions the disparity in students who were physically present (n=52) and those who registered online as having been in attendance (n=150) was 98 students which represents 26.2% of the year group.

Discussion:
Several factors seem to impact on students’ physical attendance including: perceived utility, relation to assessments, monitoring of attendance and reputation of the lecturer. Increasingly students are also watching recordings of lectures and it is debateable if this should count as attending. The aim of registering attendance using an online form was to reduce the possibility of students signing in for each other. Students learnt that the link to the online form followed a predictable nomenclature and so some students registered as having attended even before the session began. Additionally, once the QR code for the attendance survey was shown in the lecture this was shared through social media allowing students who were not present to then activate the link. It appears students are more willing to falsify an attendance register when using an electronic format and that this may enable students to subvert systems. The potential implications for the impact of electronic verification on professionalism will be considered. Additionally we will discuss how we modulated student behaviour using targeted email to those who falsified attendance and how this was perceived by students.

References:

Presentation Details: Wednesday 3rd July, 3.50-4.10pm, Dochart 2
Challenging values and questioning norms: Discourse in LGBTQ+ medical curriculum
H Bintley
Bart’s and The London, School of Medicine and Dentistry, Queen Mary’s, University of London

**Background:**
LGBTQ+ identifying patients experience discrimination in healthcare (1, 2, 3). This appears to be associated with a number of complex factors, one of which is a lack of LGBTQ+ related medical curriculum content (4, 5) ill-preparing doctors of the future to care for this community effectively (5, 6). Here the author considered how this could be improved by turning the spotlight onto medical education, considering how medical education professionals work together to develop LGBTQ+ related content in medical degrees, and what this might mean for curriculum development in the future.

**Methodology:**
Approaching this study from post-structural (7, 8) and queer perspectives (9) the author used feminist post-structural discourse analysis (FPDA) (10) to analyse multi-task focus groups of medical education professionals in one institution in the UK. Three focus groups were undertaken with professionals spanning the spectrum of curriculum delivery and development using stratified sampling. The focus groups were also filmed in order to analyse both verbal and non-verbal language. The discourses employed by these professionals to develop LGBTQ+ related medical curriculum content during the focus groups were analysed, and the author considered how these discourses could be perpetuating the aforementioned lack of curriculum content. This methodology is seldom used in medical education but here the author illustrates its successful use and potential value for future medical education research.

**Results:**
Within the datasets, four main discourses were identified that influence how curriculum is developed by medical education professionals and how perceptions of LGBTQ+ identity feed into this development. These discourses were gendered oppositions, competing specialisms, curriculum expectations, and relevance of LGBTQ+ issues to education professionals and how perceptions of LGBT+ identity feed into this development. These discourses together to develop LGBTQ+ related content in medical degrees, and what this might mean for curriculum development in the future.

**Discussion:**
Further analysis of the data revealed a possible connection between a lack of LGBTQ+ curriculum content and the aforementioned discourses. This possible connection also identified a need to discuss the role of the biomedical model (11), gender performativity (9), and outcomes-based curriculum approaches in perpetuating a lack of curriculum content in this context (12, 13). Recommendations for improving the curriculum were made and included staff training, inter-disciplinary curriculum development strategies (14), and cultural competency training (15).

**References:**
Defining Professionalism for Mental Health Services: A Qualitative Study
L Aylott, G Finn, P Tiffin, S Brown
Hull York Medical School

Background:
Much effort has been made in attempting to understand and explore the concept of ‘professionalism’ within medicine (1-5); yet there is a dearth of studies focusing on the topic in mental health services, where patients’ needs differ. In mental health services, patients are often deprived of their liberty; therefore, issues in relation to patient autonomy, one of the three fundamental principles of medical professionalism (6) become problematic. Individuals using these services are vulnerable (7) and may be unable to protect themselves from harm or exploitation. Hence, this study sought to understand and explore professionalism within a mental health service context.

Methodology:
Having initially conducted a pilot focus group, five additional focus groups were conducted with carers, nurses, occupational therapists, psychiatrists, and psychologists; one to one interviews were undertaken with current and former mental health service users. All interviews were audio recorded and transcribed verbatim. A framework analysis approach has been adopted in order to understand the data. Following initial open coding, a priori categories based on the professional attributes framework (8) are being employed to map content. The professional attributes framework originated as part of the ‘improving selection to the foundation programme’ for medical graduates.

Results:
Fifty five individuals participated in the study (34 staff; 7 carers; and 14 patients), resulting in theoretical saturation. Data were mapped to all nine professional attributes, including: 1) commitment to professionalism, 2) coping with pressure, 3) effective communication, 4) learning and professional development; 5) organisation and planning, 6) patient focus, 7) problem solving and decision making, 8) self-awareness and insight, and 9) working effectively as part of a team. Preliminary findings suggest that, in mental health services, particular emphasis is placed on the theme ‘patient focus’ in comparison to all other attributes. Within this theme, there is a focus on the demeanour of a clinician and the need for a holistic, person-centred, recovery-focused approach. Effective communication was highly regarded. Staff are expected to listen to patients, but they are also expected to talk and provide reassurance. Discussions focused on both online and offline behaviours and interestingly, the topic of black humour emerged. When focusing on unprofessional behaviours, reference was made to inappropriate relationships, exploitation, physical abuse, and derogatory comments from staff, as well as shouting patients down. The need to maintain safety and challenge the unprofessional practice of others was highlighted; to do so, practitioners must have courage.

Discussion:
Having mapped the content of interviews against the professional attributes framework, additional themes and emphases were identified in relation to a mental health service context. When exploring professionalism in this setting, emphasis is placed on maintaining safety and the need for humour whilst dealing with challenging situations. Provisional findings from this study will help inform the future teaching of professionalism in mental health services. In addition, the themes generated will enhance the development of future assessment tools on this topic, including situational judgement tests.

References:

Presentation Details: Wednesday 3rd July, 4.30-4.50pm, Dochart 2
Exploring Empathy: Implications for Teaching and Assessment
M Fyfe, C Douglass
Imperial College London

Background:
Empathy is widely seen as an important aspect of clinical care, and yet remains conceptually contested within medical education. How empathy is conceptualized has important implications for how we support its development in our students. Within one primary care education team, we undertook a collaborative exploration of “empathy” in order to inform our educational praxis.

Methodology:
We undertook a narrative review of the literature drawing from diverse disciplines, including neuroscience, behaviour science, psychology and medical education. We looked for empirical evidence of empathy as a physiologic and behavioural phenomenon and considered this within the context of medical education practice.

Results:
Neuroscience and behavioural studies strongly suggest that empathy is an innate process through which we can share the feelings of others. There is evidence of innate bias towards ‘in-groups’ in which we may be unconsciously more empathic towards those most like ourselves. Expression of empathy is moderated through socialization. While other disciplines have focused on empathy as an emotional process, within medical education the concept of ‘cognitive’ empathy has dominated the research and discourse.

Discussion:
Medical education should acknowledge emotional and cognitive empathy as simultaneous and co-existing. Students may need interventions to learn to recognize and manage innate emotional processes, which could help avoid empathic distress and decrease biases. We should seek to intentionally enhance students’ abilities for cognitive empathy. Research is needed to understand the role of socialization in physician empathy. Acknowledging the emotional and cognitive aspects of empathy may allow us to train physicians who will be more resilient and equitable.

References:

Presentation Details: Wednesday 3rd July, 4.50-5.10pm, Dochart 2
Forging a new identity: experiences of, and attitudes towards, Physician Associates.
M Brown, W Laughey, M Veysey, G Finn
Hull York Medical School

Background:
The role of the Physician Associate (PA) is still in its infancy within the United Kingdom and, as such, PAs are still in
the process of defining their professional identity. Professional identity can be described as ‘the foundational
process one experiences during the transformation from lay person to physician’ and concerns education regarding
the ‘core values [of a healthcare professional], moral principles and self awareness’ 1 and is crucial to success as a
healthcare practitioner. Attitudes of others impact on identity formation within other fields 2. Given their relatively
recent arrival to the field of medicine, examination of the professional identity student PAs possess, their
experiences and the attitudes they encounter is warranted in order to better understand and support PAs as
developing healthcare professionals.

Methodology:
We conducted a multi-site, qualitative, study undertaking semi-structured interviews of PA students at the Hull
York Medical School and the University of Sheffield. 19 students were interviewed. Interviews were transcribed
verbatim and thematic analysis using a general inductive approach was undertaken. Identification of themes
occurred following in-depth analysis, with each theme clarified alongside exemplar quotes.

Results:
The key negative themes identified were mistaken identity, negative perceptions of the role and lack of political
support. Mistaken identity was common, with staff often introducing PAs as medical students. Poor understanding
of the role is echoed amongst patients and even within official hospital documentation. PA students of ten
encountered negative attitudes towards their role, contributing in some to an ‘identity crisis’. Many also struggled
identifying the requirements of a qualified PA, given poor access to PA role models, and felt pressure to be an
ambassador for the role. Finally, frustration was voiced at the ways PAs are being treated politically.  The key
positive themes identified involved recognizing supportive influences for identity development amongst student
PAs- continuity, autonomy, graduate status and acquisition of clinical skills. Resilience was also noted as critical to
PA identity.

Discussion:
Discussion: Identity dissonance is evident within many students, with ‘identity crises’ occurring early within training.
This may be due to lack of access to PA role models and poor guidance regarding identity formation. It is unclear
what a robust PA identity is to many students and, as such, they are committing themselves to an identity when
uncertainty exists as to what that truly entails. There is overlap between positive influences upon identity formation
identified within the wider literature and those noted here. However, influences upon identity unique to student
PAs included acquisition of clinical skills, which students felt proved their utility; graduate status and the critical
role of resilience. Student PAs strive to be taken seriously and feel under pressure to prove their worth. Attitudes
towards students were mixed with a recent positive shift, secondary to role familiarity. Despite this, resistance
persists, causing upset and doubt. Ignorance surrounding the PA role was ubiquitous and destructive. Other’s
attitudes had a variable impact on PA identity formation. In response to negativity some students withdrew from
learning, but, in some, it built resilience. Individuality plays a role in how attitudes impact identity. Conclusions:
There are limited data on the professional identity of student PAs within medical education research, education of
PAs and nationally. This lack of focus has allowed harmful influences and uncertainty to propagate leading to
identity dissonance. Attitudes towards, and understanding of the role, is improving, yet advances in this sphere are
often driven by students. Further organised support for student PAs in developing a robust professional identity is
crucial in ensuring their current and future success within the role.

References:
2. Cruess RL, Cruess SR, Boudreau JD, Snell L, Steinert Y. A Schematic Representation of the Professional Identity Formation and Socialization of Medical

Presentation Details: Wednesday 3rd July, 5.10-5.30pm, Dochart 2
Peeling back the layers: Making professionalism teaching meaningful
I Rodd, S Lynch
University of Southampton

Background:
Professionalism is considered a core outcome for medical graduates (1). Despite this, integrating professionalism teaching into the curriculum in a meaningful way remains challenging (2). Southampton Medical School launched a new final year Personal Professional Development module in 2017. The aim was to create a module which felt meaningful to students and helped them prepare for clinical practice. The module runs alongside students’ clinical placements in final year. Teaching centres are dispersed, with students placed in the south of England, Jersey and Germany. The module centres around five core elements:

- Story-based learning, grounded in students’ lived experience
- Supportive material, built around Good Medical Practice (3)
- Locally delivered, clinician-led facilitated tutorials
- Creation and submission of Situation Judgement Test (SJT) style questions
- Use of a wide range of eLearning approaches including: Online classrooms, Sways, PeerWise and Twitter, with the module material including videos, podcasts, assessments, updates, and links on the university “Blackboard” platform. Students are required to participate in four tutorials, either face to face or on-line, and submit five pieces of work: four SJT-style questions and a final reflective piece exploring what professionalism means to them. Student feedback for the first cohort was obtained and is presented here. We will also provide a brief overview of the module a year on and consider the broader implications.

Methodology:
Students were sent a standard module evaluation form electronically. They were asked how they would rate the module overall, the organisation of the module, the quality of the online materials, the quality of the face-to-face tutorials and, where applicable, the quality of the online tutorials. A Likert scale of 1-5 was used, with 1 being very poor and 5 being very good. There was also space to provide free-text comments. We present the frequencies and discuss our findings using illustrative quotes from the free-text section.

Results:
In the 2017/18 academic year 199 final year BM students completed the module. Students were based in 13 regional centres for 24 weeks and were broken up into 20 groups, supported by 18 tutors. All students attended 4 tutorials, and 196 submitted 5 pieces of work, with only 3 needing to do a supplementary piece having missed the deadline. 37 students completed the module evaluation. When asked how they viewed the module overall, there were a range of responses, with 3 students rating the module as very good, 15 rating it as good, 9 having neutral feelings about it, 8 viewing it as poor and 2 viewing it as very poor. All students felt it was well organised, with 31 rating the organisation as good or very good, and 6 having a neutral response. There were mixed feelings regarding the supportive online materials, with 5 rating them as very good, 12 as good, 10 as neutral and 9 as poor. Students felt the quality of the face to face tutorials was good, with 9 rating them as very good, 15 rating them as good, 11 rating them as neutral and only 2 rating them as poor. Of those who attended one of the online catch-up tutorials, 3 felt that the tutorial was very good, 5 felt it was good and 15 provided a neutral response.

Discussion:
For a new module, focused on a challenging area, the results are encouraging. Students found the module acceptable and actively participated in all components. Having students widely dispersed is a challenge, but local tutorials worked well, with the online catch-up sessions being successful in supporting students who missed their local tutorial. This model, grounded in students’ lived experience and framed by Good Medical Practice (3), appears to be a useful, meaningful way to provide supported exploration of professionalism for final year medical students. It is flexible, and easily adapted, whilst potential benefits for supporting students throughout their journey from college to trainee using this model are plentiful.

References:

Presentation Details: Wednesday 3rd July, 5.30-5.50pm, Dochart 2
Professional Identity Formation and The Black Medical Student
O Adesalu, R Bregazzi
Basildon and Thurrock University Hospitals NHS Foundation Trust, Essex, UK

Background:
The General Medical Council (GMC) regards supporting the process of professional identity formation as an important objective for medical education (1). Although there are varying descriptions of what constitutes professional identity, its formation is understood to be both an internal and external process (2, 3), of which experience is viewed to be integral (4). Socialisation into the medical profession, and therefore professional identity formation (2), consists of the incorporation of one’s personal and professional lives through the negotiation and perception of personal experiences (2, 5). The process of acquiring a professional identity may be experienced differently by those belonging to particular demographics, such as ethnic minority groups (6). Literature shows that people in such groups may find their experience of forming a professional identity might be helped or hindered by the presence of pre-existing identities (6). The aim of this study was to explore the experiences of black medical students in relation to the development of their professional identity at medical school, in order to provide insight into the complexity of the process and encourage reflection in students and their educators.

Methodology:
This qualitative study was undertaking utilising Interpretative Phenomenological Analysis (IPA) (7). Semi-structured interviews were conducted with four black medical students from two universities in the UK. The interviews were transcribed to give a descriptive narrative of the experiences of professional identity formation for the participants of the study. The transcriptions were then read through twice and initial impressions were recorded as a free-text analysis. The transcriptions were read a third time and concise, descriptive summaries were created in the form of ‘labels’. The labels were then grouped into ‘clusters’, which were assigned based on labels that were believed to convey similar messages. Clusters were then further grouped into themes, which were then presented as ‘models’.

Results:
The findings suggest that the participants of this study felt their experience of professional identity formation was shaped by their ethnicity. The participants experienced feelings of isolation, concern about other people’s perceptions of them and varying perspectives of themselves within the medical profession. Additionally, participants perceived the presence of black role models and other black medical students to be beneficial. Their perceptions appeared to be influenced by their experiences and were both personally and socially formed.

Discussion:
The participants reported that being black and a medical professional provided complex and unique challenges, as it involves the negotiation of their perceived multiple identities. Participants described overcoming feelings of isolation within the medical profession through suppressing aspects of their personal identity as a form of assimilation. This study highlighted the importance of role-modelling. Thus, supporting the creation of networks for black medical students in which they can share their experiences may help ease the burden of isolation. Recognition of the importance of the ‘hidden curriculum’ and the role it has to play in the experiences of black medical students is recommended. Participants reported fearing they would harm their career prospects by openly discussing negative experiences in clinical environments, including racial abuse from patients. Apparent misalignment between what constitutes ‘offence’ between students and supervisors also impacted on the experience of professional identity formation. During social interactions, medical educators may be unintentionally conveying marginality, therefore perpetuating the sense of isolation for black medical students. A better understanding of how professional identity formation occurs in black medical students may aid medical educators to support them during this process. Further research in this field is required.

References:

Presentation Details: Thursday 4th July, 2.00-2.20pm, Dochart 2
Professionalism in the pre-registration pharmacist placement: an exploratory stakeholder study
H Ireland, R O'Rourke, J Sowter
University of Leeds

Background:
Within the UK, interest and focus on professionalism within pharmacy professionals has increased in recent years. Reasons for this include; a range of different reports highlighting poor patient care (1) and the expanding roles for pharmacists (2) demanding greater patient-centered care. This has led to questioning how future pharmacists are trained and assessed on the pathway to registration. Our study set out to illuminate what perspectives of professionalism are held by different stakeholders involved in pre-registration training? What approaches to the learning of professionalism are experienced during the pre-registration pharmacist placement? How are judgements made on a trainee’s achievement of professionalism in the placement year? This study explored the General Pharmaceutical Council (GPhC), service users, pre-registration pharmacist trainees and pre-registration tutors from the South West of England insights into these questions. Representation of these four groups within one study is a novel design thus addressing a gap within the literature and enabling a deeper insight into the phenomenon.

Methodology:
An interpretative paradigm approach was adopted, involving a semi-structured group interview, focus groups and qualitative e-questionnaire. An active thematic interpretative analysis approach was used to identify, evaluate and consider patterns and meaning across all data sets. The unique design of this study has provided opportunity to explore the perspectives within and between each of the stakeholder groups to identify areas of agreement and divergence.

Results:
A shared definition of professionalism was elusive. However, many stakeholder groups used similar terms to describe professionalism. Trainees and tutors provided insights into transformative moments that happened during the training year to potentiate professionalism development. The first moment being the issuing of the title ‘pre-registration trainee’. All groups reported constructive and meaningful interactions with patients in the workplace throughout the placement as aiding professionalism maturation from a ‘self-centred student’ to becoming an ‘outwardly looking and responsible professional’. Although no tutors reported that patients formally provided direct feedback on the trainees’ professionalism, service users wanted to be involved in the assessment. Tutors indicated the rate of professionalism development may be different across different sectors of pharmacy practice, with community pharmacy practice facilitating faster professionalism maturation due to increased trainee autonomy. Trainees verbally shared reflective insights into their maturation of professionalism to ‘become’ a pharmacist. Tutors stated that trainees find writing reflective statements regarding their professionalism development and attainment difficult.

Discussion:
This study proposes the existence of transformative moments and maturation periods during the pre-registration year. We recommend the formal and consistent involvement of patients in how judgements are made on a trainee’s achievement of professionalism in practice. Our study suggests careful planning of training placements to enable different rates of professionalism development in different sectors of pharmacy practice to be considered. We additionally propose that trainee led verbal reflections, e.g via a personal audio-diary, would provide insight into the trainees professionalism insight and could be formally used to assist tutors in their judgements of the trainees' professionalism. Further research could include exploring rates of professionalism development and assessment approaches in other areas of pharmacy practice, such as within mental health and prison pharmacy services.

References:

Presentation Details: Thursday 4th July, 2.20-2.40pm, Dochart 2
Raising Concerns - the potential impact on medical student professionalism
E Sullivan, H Thampy, S Gay
University of Manchester

Background:
This work is representation of a Masters dissertation research project on medical students’ perception and experience of raising concerns and the potential impact this may have on professionalism. The author has developed an online raising concerns support process for medical students and therefore it was essential to have greater understanding of this concept from the student perspective. The author wished to gain information on students experiences, both real and perceived, of their understanding of professionalism and raising concerns and whether they actually do raise concerns.

Methodology:
This single site exploratory study consisted of face to face, semi structured interviews with 10 undergraduate medical students of years 3, 4 and 5 (clinical years). Interviews were digitally recorded and transcribed verbatim. Thematic, comparative analysis was conducted and data was sense checked by co-authors in line with the interpretivist paradigm.

Results:
Results are now available for presentation at the ASM. 5 broad themes of influence emerged: 1. Students have a sense of professionalism both good and bad. 2. Students are vulnerable in clinical environments and this is compounded by their personality traits often creating internal conflict. 3. Students identify the concerns process to have positives and negatives. 4. Hidden curriculum is a powerful driver, especially role models and hierarchy. 5. Students concerns about other students. Students are a tight knit group who rarely raise concerns about other students even when they have significant concerns about that student’s future as a fit to practice doctor.

Discussion:
Medical students are exposed to a variety of educational and clinical settings and therefore are ideally placed to identify the quality of professionalism and practice, both positive and negative. There are many factors that determine whether they raise concerns or not. They also have unique insight into their close knit student community which they often do not share when concerned. Medical educators must ensure that students understand how and when to raise concern or at the very least support students to discuss concerns with a ‘go to’ person. Professionalism is an essential concept to ensure public trust in the doctor as a professional. There needs to be more exploration of student to student concerns as students have insider knowledge of poor professional behaviour which they often do not report about their peers. This presentation will give attendees greater insight into the challenges medical students face when considering whether to raise concern.

Presentation Details: Thursday 4th July, 2.40-3.00pm, Dochart 2
Student-Specific Schwartz Rounds: An Innovative Approach to Reflective Practice
D Gleeson, I White, M Awan, J Arwyn-Jones
Imperial College

Background:
Schwartz Rounds are a form of group reflective practice, where all NHS staff come together to discuss the emotional and social aspects of working in healthcare, in a meeting led by a trained facilitator. With a high prevalence of burnout amongst medical undergraduates and junior doctors reported, this meetings offer a useful source of support, with the aim of enhancing communication and compassion. However, medical students often have little to no exposure to Schwartz Rounds during their training. The objective of this study was to assess the impact the introduction of bespoke, student-specific Schwartz Rounds had on Year 3 medical students, and whether it led to an uptake in future Schwartz Round attendance.

Methodology:
Three student-specific Schwartz Rounds were piloted at Imperial College, following the standard Schwartz Round format of a panel presentation and then open discussion amongst the audience. Participants filled out an evaluative questionnaire after attending each session. The students were then followed up after 6 months to assess whether they had attended any open Schwartz Rounds across the Trust, to assess a change in behaviour.

Results:
20 students attended the first Schwartz Round, with an overall strongly positive pattern of feedback. 100% stated “today’s Round has added to my insight and self-awareness”, whilst 85% rated the session as “excellent or exceptional”. 85% stated they plan to attend future Schwartz Rounds, and 85% stated they would recommend Schwartz Rounds to their colleagues. Furthermore, 85% of students stated they preferred the Schwartz Round format to undertaking written reflective practice, whilst only 5% preferred written practice. The results from the 6-month follow-up of future Schwartz Rounds are not yet available. Two further Schwartz Rounds sessions are planned within this academic year, before July, and the completed results will be compiled at this stage.

Discussion:
The students found the Schwartz Round experience to be overall a strongly positive one, providing an effective space for self-reflection and insight. The majority of attendees stated a preference for the Schwartz Round format over standard written reflective practice. We await the results of the 6 month follow-up assessment to see whether introducing students to the concept of Schwartz Rounds early on in their medical education leads to a resultant change in uptake rates of students attending future Rounds.

Presentation Details: Thursday 4th July, 3.00-3.20pm, Dochart 2
An assessment of the impact of pre-test preparation on performance in the UK Clinical Aptitude Test (UKCAT): a national study.
S Kulkani, J Parry, A Sitch
University of Birmingham

Background:
The UK Clinical Aptitude Test (UKCAT) measures abilities and attitudes conducive to being a medical practitioner using constructs likely to be less affected by socio-demographic factors than traditional measures of potential. While the UKCAT does reduce the historic selection advantage for female applicants over males, the test’s impact on other socio-demographic variables associated with a disadvantage in traditional selection processes appears to be less clear.

We have argued previously that one reason for this observation may be that the increasing use of UKCAT by universities is normalising its use in the selection process. Thus, secondary schools which seek to ensure high numbers of their pupils progress to elite universities and professional courses are increasingly aware that to succeed in their applications, their pupils need to be made aware of the demands of UKCAT and to practice for the test. At the same time and unsurprisingly, there has been an exponential growth in the commercial ‘how to pass the UKCAT’ industry.

We hypothesise that over time schools and careers staff will get better at preparing candidates and more commercial courses and preparation aids be developed; following on, it might be speculated that this is likely to be to the advantage of students from more affluent families and those attending selective or independent schools. Thus the socio-demographic biases and their origins inherent in the traditional selection processes may play out similarly in the performance of students on the UKCAT test.

Study Aims:
1. To describe the different forms of pre-test preparation (PTP) used by candidates sitting the UKCAT
2. To determine whether there is an association between PTP and performance in the UKCAT
3. To describe the socio-demographic characteristics of participants reporting different forms of PTP, or none.

Methodology:
Study design: Cross-sectional study utilising a bespoke questionnaire embedded within the 2017 UKCAT electronic test platform to investigate the impact of preparation activities on performance in the UKCAT.
Study Population: All UK resident, non-graduate applicants who sat the UKCAT in 2017 and consented to use of their data (n~19000).
Study variables: Participant demographics (age, gender, ethnicity, nationality, area of domicile, socio-economic status and school/college details); UKCAT scores (total and by domain); and PTP.
PTP measurement: After candidates completed the UKCAT they were directed to an on-screen questionnaire which sought information on how they had prepared, the resources used, and the time spent on each. PTP is categorised according to time spent preparing, degree of school-based preparation, use of free resources from UKCAT website, and use of free and ‘paid-for’ commercial materials and courses.
Ethical approval: University of Birmingham; ref: ERN_17-0521

Results:
Statistical analysis is on-going and will complete in April 2019. The descriptive statistics of the characteristics of the applicants, their UKCAT results and their PTP will be reported, and the univariate associations between them. Multiple linear regression will investigate the association of total UKCAT score (primary outcome variable) with PTP.

Discussion:
This study will provide information to the extent to which PTP is associated with UKCAT performance, the types of PTP used by candidates, and the association of these with key socio-demographic variables. Understanding the inter-play of these factors will assist policy-makers and educators determine the utility of the UKCAT as a mechanism to aid selection to medical and dental programmes.

References:

Presentation Details: Wednesday 3rd July, 3.30-3.50pm, Etive
Background:
The Dare 2 Doctor programme, a 3 day workshop run at Great Western Hospital (GWH), Swindon, for local 6th form students over 17 years of age interested in a career in medicine, has been run for the last seven years. There is a competitive application process and all students attending schools in the local area are eligible. The aim of the programme is to provide workshops on applying to medicine, medical careers, mock interviews, fun clinical skills and simulation sessions. It also provides a day of shadowing doctors working at GWH. Applying to medicine is competitive. The number of applicant to places for 2018 standard entry for Home/ European Economic area students varied from 6 to 14.3 (1). In this study we analysed the number of applicants to the Dare 2 Doctor programme and followed up their career progression.

Methodology:
Data regarding applications from 2016 to 2018 was analysed. Places were allocated based on expectation of meeting the academic requirements to apply to medical school and personal statement score, which was reviewed by two independent markers. The students were followed up using the email address they provided at the time. All attendees were asked if they were applying for medicine and if so in which academic year, applied last year, unsure of plans or no longer interested in a career in medicine. They were also asked a free text question to assess what they had found most useful from the programme.

Results:
Interest in the Dare 2 Doctor course has been increasing. In 2016 there were 30 expressions of interest and 21 applications, in 2017, 45 expressions of interest with 33 applications and in 2018, 49 expressions of interest with 39 applications. Unfortunately availability of places has been capped due to staffing and logistical reasons. In 2017 and 2018, 21 students attended the entire courses. From the 2017 cohort, nine people replied, with seven having applied for medicine and received an offer, one choosing to apply in 2018 and one no longer considering medicine as a career. From the 2018 cohort, 14 people replied (of the 18 emailed), 13 were in the process of applying to medicine and one had decided to apply for an operating department practitioner course. Overall feedback was positive with students finding it helpful in career planning. “Dare 2 Doctor was helpful in my decision making” and “Dare 2 Doctor helped me make an informed decision on what to study.” Students also commented that “Dare 2 Doctor helped with interview preparation and gaining experience in the workplace” and all students, who replied to the survey, that applied to medicine in 2017 were successful in gaining a place to study medicine. Students who applied in 2018 will be followed up to assess how many applications were successful, and results will be available in the summer.

Discussion:
The Dare 2 Doctor scheme has been popular with students, with a high proportion of attendees going on to apply for medicine. Many commented in the feedback at how helpful they found the programme in decision making, deciding if medicine was the right career choice and those that went on to attend interview noted it provided an opportunity for work based experience and helped with interview preparation. The number of applications has been increasing and an expansion of the scheme to accommodate more than 25 students would provide greater opportunities for local students wanting to pursue a career in medicine; providing more opportunities for work experience and helping students plan and successfully negotiate the path to being offered a place at a medical school. By having an increased number of places it would allow any interested student the opportunity to gain valuable experience and insight.

References:
Developing a sustainable national approach to measure and support widening participation in medical schools
S Curtis, P Tang, P Lambe, C Owen, D Smith, P Garrud
University of Southampton

Background:
The Medical Schools Council Selection Alliance (MSCSA) Board was established to lead the development of work relating to selection and widening participation (WP) in the UK. The Board’s data monitoring group aims to monitor and report progress made by medical schools to widen participation and also to provide support to schools through easy to access demographic data. It is important that data are collected on the demographics of the students studying medicine to determine whether progress has been made in WP, especially for those from disadvantaged social and educational backgrounds. Additionally, it is important to analyse data on other personal characteristics of students to ensure that their profile is representative of the communities they will serve in future.

Methodology:
The Selection Alliance liaised with the UK Medical Education Database (UKMED) for access to student data collated from a variety of sources, including the Higher Education Statistics Agency (HESA). Key tasks were established to ensure an accurate and efficient monitoring and reporting process of WP, namely:-

1. Undertake mapping of course codes and titles in the HESA data to the classification of course types published by the medical schools council
2. Establish appropriate demographic/contextual variables
3. Produce baseline entry profile reports, nationally and for individual medical schools.
4. Access UCAS data on applicants to medicine
5. Liaise with UKMED to ensure access to all relevant data including undergraduate and postgraduate progression data
6. Provide easy to access data for medical schools
7. Develop research projects to identify and provide support for the best practice use of contextual variables in admissions processes and widening participation initiatives.

Results:
Following consultation, all UK medical schools confirmed course code data, which fed into the medical school baseline entry profiles report. From the reports each medical school is able to view their students’ entry profile by: course type and year of entry, and compare those to the national profile and Russell Group profile. The reports contain data on a variety of demographic variables including; gender, ethnicity, parental education, POLAR, IMD, social-economic classification and school type. Additional data has become available from UKMED including UKCAT bursary and postgraduate progression data by course type. Research projects have been developed to look at the contextual variables to establish recommendations for best practice in contextual admissions and to determine the effectiveness of WP programmes in attracting students from disadvantaged and under-represented backgrounds.

Discussion:
In accordance with the national agenda for widening participation of under-represented groups in medicine, a foundation for reporting and monitoring progress has been developed based on person-level, auditable data. Enabling accurate data to be reported on a national level provides a clearer picture of overall progress being made towards diversifying the profession and context for analysis of individual medical schools’ progress. These data provide opportunities for medical schools to determine the effectiveness of outreach, admissions processes, and bespoke medicine programmes in achieving their aims. This information may also help reduce the workload of medical schools by negating the requirement of annual reporting of data by individual schools to the GMC. Further research provides a rich opportunity to develop informed support for best practice use of contextual variable in admissions and selection processes. Providing clear, accurate data to medical schools facilitates accurate monitoring of progress in widening participation to medicine. Effective use of these data can establish the national WP profile and also reduce the workload of medical schools, as well as supporting best practice in contextual admissions and other widening participation initiatives.

Presentation Details: Wednesday 3rd July, 5.30-5.50pm, Etive
In at deep end: can sixth form work experience students take on the challenge of a third year medical school simulation session?

R Hearn, P Tayler-Hunt, K Arblaster
King's College London

Background:
Simulation is a well-established feature of medical education and much of its value lies in the opportunity to practice diagnostic and reasoning skills in a risk-free environment [1-3]. Whilst the 3rd year medical students who attend simulated GP surgery sessions are likely to be conscious of the performance expectations for their stage of training, 6th form students with a prospective interest in pursuing undergraduate medicine are less likely to be conscious of their own competence or incompetence [4]. Therefore, these uninitiated students may engage in learning with less trepidation and report greater levels of confidence when placed in a situation where they are expected to simulate a doctor-patient interaction. We sought to identify the utility of this experience for prospective medical students and how this impacted on their vocation. Additionally, we considered the benefit of facilitating these sessions for clinical medical students.

Methodology:
Two sessions were delivered to 12 A-level students applying for medicine. Students came from both widening participation and selective schools. The sessions were facilitated by clinical medical students. In these sessions at the Royal College of General Practitioners (RCGP) students took on the role of the doctor in common general practice scenarios. The sessions used the same scenarios and patients as our MBBS course without adaptation. The learners provided feedback on the session and facilitators were surveyed and interviewed. One session was observed by an independent educationalist not known to either group. Dual coded thematic analysis was undertaken of anonymous interviews and free text comments. This was triangulated with semi-qualitative and observational data. Further sessions are planned to provide further data which will be available for analysis before presentation.

Results:
Both school pupils and the medical student facilitators found the sessions enjoyable and useful. There was unanimous consensus that the school pupils approached the tasks with less fear than medical students and that this enabled them to perform with a more confident, yet more reckless approach to clinical diagnosis and treatment. Limitations to their clinical reasoning and examination skills, resulted in teachers switching to facilitated learning rather than pure simulation. The medical students experienced a renewed vigour in their own learning through reflecting on the fervour of those with a fresh passion for studying medicine. The views of the school pupils were mixed with regards to their vocation with some finding the experience inspirational and achievable; however some recognised that being a doctor was harder than imagined. Several students reported increased desire to be a general practitioner when qualified.

Discussion:
Dropping prospective medical students in the deep end in a safe and supportive environment enabled them to get a truer taste of medicine and life as a medical student. The facilitators of the session improved their teaching skills and felt able to deliver useful role-modelling. This early exposure to general practice had an impact on students’ aspirations to work in primary care. A pre-simulation session with the basics of clinical reasoning and examination skills would make the experience more approachable for school students. Overall this was a useful way of delivering an impactful experience by incorporation into an existing programme.

References:
Medical Application Preparation Study (MAPS): Exploring culture and perceptions through applicant stories
D Jackson, A Spruce, N Whalley, G Seyan, C Agwu
University of Birmingham

Background:
Students from independent (fee-paying schools) and higher socio-economic classes are more widely represented in medical school applications, and are more likely to be offered a place. (1, 2). When considering potential inequalities in medical school intake, we must consider the degree of access that applicants have to particular aspects of preparation. Beyond simply the formal activities of preparation, it has been suggested that cultural capital, if lacking, can limit educational success for individuals outside of that culture (or, in this case, class) (3). Using Bourdieu’s notion of ‘habitus’ as a conceptual framework (3) this study aims to explore the material, cultural and perceptual experiences of medical school applicants, to better understand the explicit and implicit challenges of access faced as they prepare for selection.

Methodology:
An invitation to take part in a telephone interview was extended to all MBChB applicants to the five year course at Birmingham University. Demographic information was collected from those who expressed an interest via survey. Purposively sampled according to school experience, gender and ethnicity, subjects were invited to participate in a narrative telephone interview, and encouraged to tell their story of preparation. Using Labov and Waletzsky’s structural organization approach (4), each narrative transcript was independently reviewed and emergent themes identified. Team discussion developed an understanding of the material, cultural and perceptual elements within each narrative, and disagreements were resolved by consensus. The applicant’s demographic and selection information was considered as a final step in the analysis process, with reviewers unaware of this information in the earlier phases.

Results:
913 out of 2641 applicants in the 2017/18 diet agreed to be contacted for interview (34.5%). 23 were interviewed; 10 from non-selective state schools, 6 from selective state schools and 7 from independent. 20 out of 23 interviews have been analysed; expected completion by May 2019. The presentation will aim to illustrate 2 applicant stories, followed by a consideration of wider themes across the narrative accounts. One applicant, a daughter of a doctor, tells a story where material resources, such as help from school, peers and family, are easily accessible. Demonstrating cultural capital, with a clear ability to navigate access to resources required for application and a confident use of medical terminology, she appears confident and ‘at home’ as she prepares. This is contrasted to the experience of a second applicant, where feelings of stress and uncertainty predominate. There is a sense of awe at a career in medicine, confusion in the use of medical terms and a retrospective questioning of her initial perceptions, which suggest a preparation journey in which the destination and navigation are less well-understood.

Discussion:
As the completed results are not yet fully available, no formal conclusions have yet been drawn. However, early analyses suggest that applicants vary considerably; materially, culturally and perceptually. The stereotyped and superficial perceptions of some applicants, regarding both the admissions process and a career in medicine, appear to contrast with the confident savoir-faire of others. Defined as ‘long lasting dispositions of the mind’, the legacies of family and childhood socialisation (the past) bring about a set of complex predispositions, which render those students from outside the predominant culture as unable to decode the implicit “rules of the game” (5-7), and this is apparent within some of the interview accounts. It has been argued that a focus on processes alone is unlikely to make significant inroads in changing the landscape of higher education (8) and these findings regarding perceptual and cultural influences in preparation for selection, may offer an important insights in how to level the playing field for applicants.

References:

Presentation Details: Thursday 4th July, 2.20-2.40pm, Etive
Medicine Applicant Preparation Study (MAPS): Preparation Activities and Challenges for Medicine Applicants

D Jackson, A Spruce, D Ward
University of Birmingham

Background:
Whilst medical schools are transparent regarding their process of selection, methods by which an applicant should prepare are typically not prescribed. The accumulation of a number of various preparatory activities has been shown to be associated with the offer of a place at medical school (1). However, early focus group research with Year 1 medical students at our institution has indicated that not all applicants had access to, or were aware of, the range of preparatory activities available. This is of particular importance if particular preparatory activities are positively associated with the subsequent offer of a place, as we risk the construct validity of our selection processes. This research aims to understand the challenges faced by applicants as they prepare for selection in the hope that this will enable identification and prioritisation of areas for change.

Methodology:
An electronic survey was distributed to all applicants to the University of Birmingham five-year undergraduate MBChB programme from November - December 2018 (prior to release of interview decisions). The survey design was informed by prior thematic analysis of focus groups with Year 1 medical students and explored: i. Degree of engagement with various preparatory activities ii. The degree of ease, or challenge, in access to each activity iii. Option for freetext response iv. Sociodemographic details v. Consent to access national data outlining the applicant’s outcomes at selection. Analyses will explore associations between specific preparatory activities, challenges experienced by applicants, sociodemographic information and the subsequent offer of an interview or place at medical school. Thematic analysis of freetext responses, using content and coding methods will be undertaken (2, 3)

Results:
Admission outcomes for 2018/19 applicants are pending, but will be available for presentation at the ASME conference. From the survey, 1511 out of 2281 (66%) applicants responded. Around 41% of applicants attended non-selective state schools, 21% from selective state schools (grammar), and 33% from private schools. Around 10% of applicants had support from Widening Participation schemes. Shadowing in a hospital was the most common work experience undertaken (83.1%). Work experience in General Practice was less common, with 49% of respondents stating they had ‘never’ done this. 22.8% did not arrange a GP work experience placement because the perceived obstacles were too great. Looking at relevant websites (90-94%), watching the news (92%), studying aptitude test books (75%) and online forums (71%) were commonly used and easy to access. Guidance and support from local universities or hospitals was a less common preparation activity, with fewer participants viewing this as easy to access (13-23%). Help from the school in arranging preparatory activities was experienced by around 75% of respondents; 22% had help from doctors in the family, whilst 35% had no help from family.

Discussion:
The Medical Schools Council’s work experience guidance emphasizes that there are ‘no rules’ in the setting, duration or type, as long it involves contact with the public and experience of the profession (4). However, it is interesting that applicants continue to prioritise hospital work experience, with the obstacles of accessing GP work experience a potential factor. Another striking observation is the geographical variation in what local universities and hospitals offered to support applicants. Support from school, family and contacts from the medical profession also remain inaccessible to some. The next phase of analysis will consider if there are associations between particular preparatory activities and the offer of a place at medical school. Given the variability of obstacles and opportunity evident within the early results, this will be an important consideration for medical schools aiming to level the playing field for applicants.

References:
Predicting the First Year Medical School Course Performance from Admissions Metrics
K Dore, K Dore, C Zou, F Juster
Altus Assessments

Background:
With the recent changes to MCAT (Medical College Admission Test) and the rising popularity of CASPer starting from 2015, new evidence needs to be gathered to assess their ability to predict medical school performance and beyond. CASPer serves to complement the MCAT by assessing the non-cognitive competencies, such as professionalism, communication skills, and empathy, which are also important to become a successful physician [1]. In North America, over 80% of medical school applicants will have completed CASPer at some point during the 2018-2019 application cycle. The test has also recently begun to expand in Australia, pointing to the importance of examining the validity evidence of the tool as it continues to gather momentum globally. In this study, we examined data from two matriculated cohorts who completed both CASPer and the new version of the MCAT to examine how they predict early medical school performance.

Methodology:
We collected data from two cohorts (n = 430, class of 2020 and 2021) and paired their admissions metrics (MCAT scores, undergraduate GPA [uGPA], multiple mini-interview [MMI] performance, CASPer scores) with their first-year performance in the basic sciences (i.e., behavioural science, molecular biology, anatomy, history of medicine, physiology). We examined subsection scores on the MCAT as each section is aimed at assessing different constructs (PSBB = Psychological, Social, and Biological Foundations of Behaviour; BBFL = Biological and Biochemical Foundations of Living Systems; CPBS = Chemical and Physical Foundations of Biological Systems; CARS = Critical Analysis and Reasoning Skills). As most students pass their courses, we dichotomously coded course performance as high-performance (i.e., honours, high-pass) or low-performance (i.e., pass, fail, conditional pass, pass remediated) to ensure that there was a sufficient sample size in each cell. Additionally, the two cohorts were merged to increase statistical power as the analyses involved dichotomous variables. Independent samples t-tests were conducted to compare differences in admissions metrics in the high-performing and low-performing groups across the five courses.

Results:
There was a significant difference in CASPer scores between the high-performing and the low-performing group in the behavioural science course (t(409) = 2.07, p = .04). There was no significant difference in CASPer scores for all the other courses. There were also no significant differences in uGPA and MMI between the two groups in any of the first-year courses. There was a significant difference in PSBB scores between the high-performers and the low-performers in the history of medicine class (t(252) = 2.72, p = .006). Some MCAT score comparisons were marginally significant, which may become significant with a larger sample size: PSBB scores differed in behavioural science (t(251) = 1.71, p = .09), CARS scores differed the two groups in physiology (t(251) = 1.76, p = .08).

Discussion:
The results of this study suggest that both CASPer and the new MCAT can predict performance in the first-year courses. CASPer predicted performance in the behavioral science course, but did not predict performance in any of the other courses. This is in line with the competencies assessed by CASPer, as the test is designed to be an assessment of non-cognitive attributes such as professionalism and empathy, and not a test of scientific knowledge. Interestingly, none of the basic science sections of MCAT nor uGPA predicted performance in any of the courses, possibly due to range restriction as there is typically a high threshold for the cognitive metrics to enter medical school. The MMI did not predict first-year performance, which is in line with previous findings showing that they tend to be better predictors of future clinical performance [3].

References:

Presentation Details: Thursday 4th July, 3.00-3.20pm, Etive
Relationship between admission criteria and academic performance: a correlational study in nursing students

B Jamil, I Yousafzai
Institute of Health Professions Education & Research, Khyber Medical University

Background:
Admission criteria is one of the key indicators to predict academic performance.[1] Educationists are interested in identifying key factors which can predict academic performance. Studies suggest that rigorous validated admission criteria can predict academic performance, decrease failure rate and successful completion of program.[2] Literature reviews suggests that admission criteria constitutes of cognitive and non-cognitive factors.[3] Cognitive variables include aptitude tests, previous academic marks, admission tests, while non-cognitive factors includes gender, previous experience, age, race, , personality and ethnicity. Various cognitive and non-cognitive factors are set in the admission criteria to identify and select students who can successfully complete their programs.[4,5] Available evidence suggests that a better formulated admission criteria including mix of academic and non-academic factors can predict better academic performance.[6] Admission criteria to diplomas and baccalaureate degree in nursing in Pakistan mainly consist of previous academic performance and entry tests score, age, gender and interviews. Admission criteria have not been researched to inform whether it is a strong predictor of academic performance. The purpose of this study was to assess the relationship between admission criteria and academic performance in the Post RN BSN nursing students at Khyber Medical University.

Methodology:
A cross sectional study design was chosen. Data (2009-2017) was gathered from the records of Institute of Nursing science, Khyber Medical University. Variables in the admission criteria included age, gender, domicile, previous academic performance, entrance test score and experience. Whereas, dependent variable was academic performance measured in CGPA. Both univariate and multivariate analysis was carried out between the admission criteria and academic performance.

Results:
The results reported a significant relationship between admission criteria and the academic performance of nursing students. Various variables in the admission criteria i.e. SSC marks \((r=0.32, p>0.001)\), previous academic score at diploma level \((r=0.48, p>0.001)\) and entrance test scores \((r=0.26, p>0.001)\) have significant relationship between academic performance. Whereas, previous academic scores at diploma level were better predictors of the academic performance.

Discussion:
The results of this study has shown a significant weak relationship \((r=0.32, p=0.001)\) between SSC marks and the academic performance. A moderate significant relationship \((r=0.48, p=0.001)\) was observed between the previous academic score at diploma nursing and the academic performance. These results are consistent with previous research studies which support the notion that previous academic performance could predict subsequent academic performance of a student. [2,7-10]. Moreover, the study concludes a significant relationship of academic performance with SSC marks \((r=0.32, p=0.001)\), previous academic score at diploma nursing \((r=0.48, p=0.001)\) and entrance test score \((r=0.26, p=0.001)\).

References:
http://www.academia.edu/4988334/Reliability_and_Validity_of_Admissions_Tools_Used_to_Select_Students_for_the_Health_Professions
The Influence of social background on medical school applicants' choice: A national qualitative interview study in the United Kingdom

EL Rees, D Harrison, K Mattick, K Woolf
UCL Medical School

Background:
Students from lower socio-economic backgrounds and educated at state-funded schools are underrepresented in medicine. Widening access to medical students from these 'non-traditional' backgrounds has become a political and research priority, in order to utilise the full talent pool of applicants, create doctors representative of the communities they serve, and ensure social justice and fairness. Applying to medical school in the UK is complex and competitive: applicants choose four medical courses from a large number of potential choices, and medical schools use a variety of selection methods resulting in differing success rates. It is known that medical schools vary in the number of applicants from non-traditional backgrounds they attract and accept [1], but the reasons for this remain poorly understood, with concern that applicants from non-traditional backgrounds are less equipped to make informed choices and maximise their chances of success. Much selection research focuses on psychometric properties of admissions procedures, with little attention given to applicant perspectives and choices. This study seeks to explore how and why applicants from different social background choose which medical schools to apply to.

Methodology:
We conducted a national qualitative interview study, adopting a social constructivist perspective. We purposively sampled applicants and first year students from eight UK medical schools, chosen based on patterns of medical school co-applications, our aim being to capture experiences from applicants to the wide variety of medical schools [2]. Participants attended semi-structured individual or group interviews exploring motivations for studying medicine, how they gathered and valued information regarding different medical schools, and how they made their choices. We performed a thematic analysis of the qualitative data. After data familiarisation, the lead author developed the initial coding framework, which was revised with input from all authors who had analysed a subset of the transcripts. We sensitised our analysis using sociological theories of capital. Following this process, the lead author (ER) coded all transcripts, with KW second-coding 20%, and discrepancies resolved by discussion within the full team.

Results:
Sixty-six individuals participated: 35 applicants and 31 students, 15 and 9 from non-traditional backgrounds (first in family to attend higher education & state-schooled) respectively. We identified three main themes: (i) priorities, (ii) perceived resources and constraints, (iii) strategies for choice. Participants’ background influenced their priorities in choosing medical schools. Traditional applicants were more likely to prioritise prestige, whereas non-traditional applicants were more likely to describe being concerned with fitting in, being close to home, and finance. Some applicants had strong preferences for particular medical schools, whereas others were more concerned with simply getting in somewhere. Applicants described how their beliefs about their own educational, social, financial, and psychological capital expanded or constrained their choices. Many described how particular teachers had strongly encouraged or put them off applying to medicine or to particular medical schools. Based on their differing priorities and perceived resources and constraints, applicants adopted various strategies in making medical school choices, varying particularly in whether or not they decided to take a risk and apply to a medical school they felt was very prestigious but they were unlikely to get in to.

Discussion:
Priorities, and perceived resources and constraints shaped applicant choice of medical schools, and these varied depending on applicant social background. Participants from non-traditional backgrounds were more concerned with fitting in, being close to home, and financial concerns, and often felt disadvantaged by their lack of educational and social capital.

References:

Presentation Details: Wednesday 3rd July, 4.50-5.10pm, Etive
Widening participation to medical school and objectively improving knowledge of the application process: Impact of a one-day conference
M Parker, J Roberts
Newcastle University

Background:
Widening participation in medicine refers to increasing the number of people from demographic groups with low participation rates applying to, and remaining in medical education.1 Disadvantaged socioeconomic backgrounds are historically under-represented in medicine.2 Reasons include disparity in educational opportunities, leading to lack of guidance on the process of applying to medical school and lack of knowledge of the role of a doctor or medical student.3 Despite endeavours made by universities to widen access to medicine, current data illustrates that just 40% of schools nationwide are engaged with medical school outreach, and ‘cold spots’ remain, many being in the North of England, from which 28% of medical students hail.4-6 Interaction with medical student near-peers has been shown to have a positive impact on confidence and aspirations to apply to medical school.7

Methodology:
A one day conference was attended by 78 students (ages 16-17 years) from 24 different schools. The students answered an online questionnaire consisting of 21 questions designed try to gauge student awareness of the application process for medical school and the role of a doctor. Students also answered 13 questions asking them to rank their confidence on a Likert scale from 1-5 (5 being most confident) with regards to their application to medical school. The aim was to see if the student’s awareness had objectively improved post-conference, irrespective of their subjective improvement in reported confidence scores. At the conference, students attended lectures and workshops on a range of topics pertaining to medical school applications and a repeat questionnaire was completed after the event.

Results:
Results were available for 74/78 students (4 excluded due to missing data). The data was normally distributed and so a paired samples T Test was performed. The one day widening participation conference elicited a statistically significant improvement in the number of students answering correctly on average across the 21 questions (n = 74, St Dev. = 10.81, p = 0.031). A Wilcoxon signed-rank test was performed and showed that the conference did elicit a statistically significant change in confidence scores in students in 10/13 questions (Z = 5.1104, p = 0.001). The non-statistically significant questions generally pertained to areas where student confidence was already high but demonstrated that student confidence to sit the UKCAT entrance exam remains low.

Discussion:
A free to access, one day widening participation conference was statistically significant in improving student knowledge of the application process to medical school and confidence to apply to medical school. Such endeavours not only expose students to factual and logistical knowledge around the complex medical application process, but also provide the opportunity to network with medical student and junior doctor peers. For students from non-traditional backgrounds, such networking allows students to meet medical students and doctors from similar backgrounds, encouraging them to recognise their own potential and submit a medical application. This work builds on the literature documenting successful outreach events from medical schools, further illustrating the need for further events of this nature.

References:

Presentation Details: Wednesday 3rd July, 5.10-5.30pm, Etive
Sustainable Healthcare in Medical Education - an underrepresented area?
A Boulton, B MacDonald
St George’s Hospital, London

Background:
The UN Intergovernmental Panel on Climate Change warned of catastrophic climate change within our lifetime if radical efforts are not made to limit global temperature rise.(1) A rise of 1.5Â°C could occur by 2030, causing more heat waves, droughts, air pollution and vector borne-disease.(2)(3) In 2016, the carbon footprint of the NHS in England was 22.8MTCO2e (Metric tons carbon dioxide equivalent)(4) - more than the entire Netherlands.(5) Procurement (purchased goods and services) generates 60%, predominantly through medical equipment and pharmaceuticals. Building energy (heating, electricity, emails, etc.) and travel (including staff) make up the remaining 40%.(6) The GMC sets a professional duty to practice sustainable healthcare.(7) The NHS also has a legal requirement to reduce carbon emissions.(8) Doctors are ideally placed to influence behaviour.(9) But does our own behaviour contribute to climate change? Has our medical training equipped us to practice sustainable healthcare? The aim of this research is to assess if recent UK medical graduates received formal training in sustainable healthcare at medical school and if they practice sustainability in the workplace.

Methodology:
95 trainee doctors working in London within the last 12 months were surveyed using Google forms. 32 (34%) responded and 4 who graduated from non-UK medical schools were excluded, giving a total of 28 (30%). Respondents completed multiple-choice, short answer and free-text questions on demographics, workplace, medical school, sustainability in their curriculum and current sustainable practice at work. Data collection is ongoing and aims to survey trainees nationally.

Results:
64% respondents were Core Trainees. 61% graduated from medical school in 2015 (range 2011-2016). 43% graduated from London schools. 78% had not encountered sustainable healthcare as a concept. Of those who had, 3 had done so at medical school and 2 received formal teaching on the subject. Those who received no formal teaching were asked to state their feelings on sustainable healthcare: 91% comments were positive; 29% respondents stated it should be taught at medical school. 93% respondents walk/cycle/use public transport to get to work. 7% use cars/taxis. 21% turn off lights at work whenever possible; 11% never do. 4% turn off appliances whenever possible; 32% never do. 4% adjust temperature settings whenever possible; 57% never do. 11% use recycling bins every time. 14% avoid wasting consumable equipment whenever possible. None tried to avoid medication waste whenever possible. 96% respondents send 1 or more emails per day from a work account; 4% send up to 15. 100% receive 1 or more emails per day; 4% receive up to 20. 68% delete at least 1 work email without reading it; 4% delete up to 10.

Discussion:
This research assessed if recent UK medical graduates received training in sustainable healthcare. There seems to be a lack of formal training of doctors in England. Sustainability rarely features in core curricula.(11) Trainees who received no formal training felt positively towards sustainable healthcare; 29% specifically stated it should be taught at medical school. This is in line with a national survey of UK undergraduates: 86% felt universities should actively incorporate sustainability into curricula.(10) This research also assessed if recent UK medical graduates practice sustainability at work. The results suggest an ongoing need to address workplace habits. Temperature settings, pharmaceutical waste and unnecessary emails were the most problematic areas of those assessed, all of which have a measurable carbon footprint.(11) This research assessed a small cross section of sustainable practice. Data collection is ongoing to capture graduates from the last 2 years and assess more medical schools. There is a need to assess the profession’s carbon footprint in other ways, e.g. use of online learning platforms. Further consideration is needed of incorporating sustainable healthcare into core curricula.

References:
11. Avoiding thoughtless waste: consider the energy cost of emails in the NHS - ProQuest [Internet]. [cited 2018 Dec 19]. Available from: https://search.proquest.com/openview/52f172680efc0f71465c36acd0d10ff2/1?pq-origsite=gscholar&cbl=2043523

Presentation Details: Friday 5th July, 9.00-9.20am, Dochart 2
Confidence is key: coupling new-skill coaching with familiar territory
H McNeilly, A Khobjhou, D Murray, T Lea
George Eliot Hospital

Background:
As medical students approach qualification a number of practical skills required as a junior doctor must be acquired on top of clinical knowledge. The ‘step up’ from undergraduate to doctor provokes anxiety, particularly around new skills such as prescribing, with many medical students feeling unprepared in these areas (1). Anxiety has been known from longstanding research to impede academic and clinical performance (2). We describe a novel educational tool in which we harness the patient journey, stepping beyond simulation to ask students to emulate the multiple roles of a foundation doctor a fictional patient’s care, including unfamiliar skills such as prescription and discharge planning. To combat the anxiety provoked, we alternated skills which students have already frequently encountered, such as a simulation A-E assessment, with teaching of novel skills - such as paediatric prescribing. By anchoring new learning to familiar experiences, we aimed to build confidence across a range of skills used by foundation doctors.

Methodology:
Final-year medical students from the University of Warwick performed a four-station scenario based around paediatric emergencies. Students completed numerical ten-point confidence scores in diagnosis, management, prescription, communication and discharge before and after the session. Students also completed MCQs before and after the session to assess knowledge and understanding. The stations were designed to alternate skills the students had frequently been trained in before (stations one and three, A-E assessment and clinical communication respectively) and novel skills (stations two and four, prescription and discharge planning). Stations one and three were performed individually with feedback from faculty (Clinical Education Fellows). Stations two and four were undertaken in groups of four, with faculty available to the students throughout, ‘coaching’ them through the process.

Results:
The session was undertaken by 45 students. Baseline confidence scores showed a mean of 4.1 (out of 10) pre-session and a mean of 7.21 post-session \( p<0.001 \). Mean pre-session confidence scores in familiar stations were 4.75, vs confidence in novel stations of 3.62. Average confidence scores showed significant improvement across all modalities \( p<0.001 \), as did student performance in MCQs themed on the presenting case (mean score pre-session 7.42, post-session 10.51, \( p<0.001 \)). We applied bioinformatics techniques to our feedback and test score data, using principal components analysis and louvain clustering to identify three student subgroups separated by pre-session confidence and pre-session MCQ score. Post-session confidence scores showed no significant difference in confidence scores, effectively abolishing the ‘low-confidence’ group.

Discussion:
Paediatric prescription and discharge planning are complex skills, which while required of the newly-qualified doctor are not routinely encountered by students as undergraduates. Our strategy of alternating unfamiliar intimidating topics with familiar skills, aimed to alleviate student anxiety and promote learning. The use of a patient narrative and the approach of faculty ‘coaching’ the group for the more demanding novel material further enhanced student learning experience. We demonstrated it was possible to significantly improve students’ understanding of the clinical condition, as evidenced by improved MCQ scores, and their confidence across multiple skills required as a foundation doctor. This technique of defusing anxiety by coupling new and familiar experiences seems to work particularly well on the subgroup of students identified by principal component analysis as having low confidence despite average MCQ scores, abolishing significant differences in confidence between the groups.

References:

Presentation Details: Wednesday 3rd July, 3.30-3.50pm, Fyne
"How did I do?" Introducing a structured approach to deliver feedback on medical student clerkings and encourage "complete clerkings"

N Devani, O Mitchell, V Gkiousias, J Walton, T Bogdanova, E Karra, P Dilworth, N Murch
Royal Free London NHS Trust / University College London Medical School

Background:
The initial clinical history and examination is a fundamental aspect of clinical practice (1). It is therefore essential that doctors possess the skills needed to extract, interpret and document information from patients to effectively manage their presenting problems. Most medical schools provide training to students before clinical encounters on how to undertake a thorough history and clinical examination (the ‘clerking’) and require students to complete a minimum number of these to demonstrate competency. Despite their importance, students often only receive appraisal on their written clerkings in an ad-hoc informal basis or verbally during educational meetings. It is well recognised that feedback is one of the ‘main catalysts for performance improvement’ and structured feedback in particular has been shown to improve medical student performance versus general feedback in an RCT (2). We therefore present a novel approach to clerking feedback provision, introduced by Dr Nick Murch (Consultant in Acute Medicine), which makes use of a structured proforma that appraises the clerking across various domains, promotes clinical reasoning and provides meaningful suggestions for development. The proforma also promotes the performance of a ‘complete clerking’ where students are actively encouraged to maintain a holistic, whole-systems approach throughout rather than being siloed into one system based on the patient’s presenting complaint.

Methodology:
University College London (UCL) 4th year medical students on their first clinical attachment within acute medicine at the Royal Free Hospital were required to submit at least one full medical clerking during their attachment. These clerkings were objectively appraised using the structured clerking feedback proforma by a clinical teaching fellow. The students were asked to complete a ‘before’ and ‘after’ questionnaire at the time of receiving their clerking feedback.

Results:
Prior to the introduction of this intervention, only 63% of students report having received any feedback on their clerkings and this was mostly an informal verbal appraisal (87%). An assessment of utility and relevance of this feedback using Likert scales (1 to 10, with 1 representing least effect and 10 representing greatest effect) revealed scores of 6.3 for usefulness; 6.4 for likelihood that the feedback will influence future practice; and 6.1 for extent to which feedback reinforces the message of a complete clerking. During the pilot phase, 6 cohorts of students (n = 61) received structured feedback on their acute medical clerkings. Using similar Likert scales, students rated the usefulness of this feedback as 9.0; the likelihood of it influencing future practice was rated 8.9; the extent to which it reinforced the message of a complete clerking as 9.5 and the extent to which the feedback would encourage them to undertake complete clerkings as 9.0. Free text comments and subsequent interviews of a selected number of students reinforced the positive perception of this approach. A survey of those students based at other placement sites not yet using the structured feedback proforma revealed that 90% would have liked to receive it in this manner. These students expressed concerns regarding uncertainty about the structure and constitution of an ideal clerking; a lack of preparedness for future clinical practice and difficulty formulating a differential and effective management plan as some of the shortcomings associated with a general verbal feedback approach which they had received.

Discussion:
The introduction of a structured clerking feedback proforma can improve the quality and utility of the feedback delivered to medical students on their acute medical clerkings. It can promote and reinforce the value of maintaining a whole-system holistic approach and, through encouraging clinical reasoning can also facilitate development of clinical decision making when determining investigations and formulating management plans.

References:
Making the most of the resources: An innovative way to conduct a student hospital induction using a virtual tour and patient interviews

J Williams, C Carus, A Bracken, M Carroll, S Salih, Z Yaqoob
Nottingham University Hospitals NHS Trust

Background:
A comprehensive induction to the clinical environment is important for medical students; especially given the limited time they have on placement. The Child Health placement at Nottingham Children's Hospital sees roughly 40 medical students per rotation undertake an 8-week placement in a new and complex clinical environment. It is not feasible to conduct a physical tour of the children’s hospital with the number of students so this had not been part of the induction. Informal feedback suggested that this was challenging for students and detracted from their learning. We set out to investigate the extent of the problem and develop a more sustainable solution.

Methodology:
We undertook a survey of medical students on placement following induction. Using a Likert scale (“Strongly disagree” “Strongly agree”) we asked students their views on the effectiveness of the current induction and their outlook for the rest of the placement. We then developed an induction video; consisting of a virtual tour of the hospital with practical tips as well as interviews with some of the patients/families. The aim of the video is to equip the students with the practical information they need to assist them with the placement and make them feel welcome and excited to join the children’s hospital. We then repeated the survey to see whether the video had a positive impact or not. The survey responses were given numerical value (15) and data analysed. Free text responses were also taken from students to provide further data and guide development.

Results:
Initial results (n=25) were consistent with our concerns but subsequently (n=23) showed significant improvement following the new induction video. Student ability to find their way around the hospital improved from a mean of 2.2 to a mean of 3.7 (p<0.001). Students comfort entering the ward was improved from a mean of 3.1 to a mean of 3.9 (p=0.007). Confidence finding ward resources was also improved from a mean of 2.7 to a mean of 3.4 (p=0.032). We also saw improvement in our secondary aims; students feeling more welcome within the children’s hospital (mean 3.8 vs 4.4, p=0.014). Overall the video was very well received: students enjoying it (mean 4.3, n=23) and finding it helpful (mean 4.0, n=23).

Discussion:
The above results suggest that the new induction video introduced for the Child Health placement at Nottingham Children’s Hospital has had a positive impact and has gone some way to alleviate the previous problems. The new induction video should serve as a sustainable solution; allowing the induction to take place without the manpower required to perform a full tour of the hospital. The video design allows it to be modified easily, hopefully keeping it from becoming outdated. Within the video the use of children’s voices and interviews with patients/families provides an innovative inclusion to the induction and will hopefully lead to students feeling more welcome and excited for the placement. The hope is that ultimately by use of this new video student anxiety will be reduced and the learning environment improved. *** Please note that we intend to show aspects of the video if accepted for an oral presentation. Appropriate consent has been taken for the patient/family interviews. ***

Presentation Details: Wednesday 3rd July, 4.10-4.30pm, Fyne
Professional identity formation during transition into clinical years: Interaction between the individual and the social
N Mayat, W Lowe
Barts and the London School of Medicine and Dentistry - Queen Mary University of London

Background:
The journey of medical students is one of professional identity formation. This social process involves an individual becoming the embodiment of that which a profession stands for(1). This embodiment includes an internalisation of the values, ethics and professional knowledge as well as understanding how an individual fits into a social context(2). However, this individualisation of a socially informed process is rarely recognised as such and moreover, tends to be heightened during transitions(3,4,5). A literature review showed a lack of research into the transitional process between the preclinical and clinical years in UK medical schools(6). Students often lack awareness of their role in placements, causing anxiety and stress(7). Research on preparedness for being a doctor tends to use a socio-cultural or individualistic cognitive lens without studying the interaction between the social and the individual(3,7). This research aimed to explore professional identity interpersonally and interprofessionally in the context of student transition to full time placements.

Methodology:
This research is based on social constructivist theory which states students as active meaning makers who learn from surrounding social situations(8). This research consisted of a focus group with a visual element. Students were asked to consider how their first placement felt reflecting on their roles and responsibilities (i.e. sense of professional identity). They were asked to bring an image or object reflecting their feelings for discussion. Other questions relating to professional identity formation were also asked. The focus groups were transcribed. Data was analysed using interpretative phenomenological analysis, a method which acknowledges and uses the experience of the researcher through reflexivity(9) and a notion of collaboration between researcher and participants(10). This was felt to be useful as the researcher was a medical student intercalating in Medical Education who had recently gone through the transition to clinical years herself. Transcript analysis consisted of notes on "Descriptive, Linguistic and Conceptual comments."(10). From these notes, themes will be extracted with an aim of finding connections between them. During this, a reflective journal is being kept to increase reflexivity.

Results:
Early indications from discussions showed students having recently entered placements found it to be a "shock." Key factors including not explicitly considering professional identity, instead referring to the process by expressing uncertainty of roles and purpose. It is expected that results will show factors making the transitional process difficult for medical students focusing on factors specifically related to professional identity formation. It is expected that analysis will show students to be unsure of their roles and that of others on the ward. It was shown that students found the clinical transition hard, often unsure of what was required of them and of the roles of other team members. How professional identity formation occurs, how that affects and is affected by the transition process and how students are currently and could be better supported during this professional identity formation will all be considered with a view of recommendations of how students could be better supported enabling the formation of better practitioners.

Discussion:
Professional identity formation occurs constantly and affects all medical students. This process is catalysed at certain points of the life of a medical student such as the transition to full time clinical placements. This professional identity formation is partly a factor making transition to the clinical world difficult. However, medical students rarely explicitly consider this factor. Should students be made explicitly aware that this process of identity formation is occurring rather than just engaging in the process implicitly as is usually done?

References:


Presentation Details: Wednesday 3rd July, 4.30-4.50pm, Fyne
The feasibility of using synchronized video-review as a tool to enhance the educational utility of surgical training opportunities

S Isreb, J McLachlan, J Illing, S Attwood, H Hesselgreaves
NHS

Background:
Introduction UK Surgical training faces the challenging environment of expanding surgical skills and shrinking training opportunities. Such challenges emphasise the need to make the most of every available experience. Aim This is a designed-based study to test the feasibility of using synchronised video-review as a reflective tool to enhance surgical training and facilitate focused and timely feedback.

Methodology:
Ten supervised laparoscopic cholecystectomy operations were video-recorded using a synchronised split-screen, to show trainees’ actions, instrument manipulation as well as trainees’ interactions with other theatre staff. This was followed up by the trainee and supervisor review of the operation-recording. Video-review sessions were audio-recorded along with the consultant and SPR interviews after the review-session. Audio-recordings were thematically analysed. Supervisors completed the Procedure Based Assessments (PBA) forms, twice: post-operation and post-video-review. Forms were analysed to note changes and triangulate the findings.

Results:
Overall trainee and supervisor feedback was positive. PBA results showed global-assessment rating improvement in half the potential cases post video-review. Trainees and supervisors reported the video-review added value in terms of reflection-on-action. It removed the stress of conducting/supervising the operation in real time and focussed the attention on feedback. Audio-visual review allowed trainees to understand the feedback better and they were more able to identify new targets beyond what was gained from feedback during the procedure. It also facilitated appraisal of the trainer’s teaching.

Discussion:
This study established the feasibility of using synchronised video-review as a reflection-on-action tool to potentially enhance surgical training by improving feedback. It also identified trainees’ difficulty in processing intraoperative feedback due to mental overload from the operation. It highlighted the limitations of verbal feedback with regard to enhancing skills and physical movements, due to the difficulty that the human brain encounters in describing automatic expert actions. Such findings are in line with findings from sports training.

Presentation Details: Wednesday 3rd July, 4.50-5.10pm, Fyne
The self-reported concerns and objectives of early clinical medical students - a qualitative study.

K Waite, B Hui, R Pooni, S Madathil
Queen Elizabeth Hospital, University Hospitals Birmingham NHS Trust

Background:
The transition from pre-clinical to clinical study marks a major point in the undergraduate career of any medical student, signifying excitement, becoming a “genuine” medical student or introducing substantial anguish. Students may simultaneously experience relish and trepidation [1]. Clinical students need to acquire skills and behaviours, as well as knowledge. The environment and the learning methodologies alter. Their pre-existing study skills are not necessarily efficacious. Adaptation to these changes may increase cognitive load [2]. The course structure at our trust is traditional. Although clinical exposure starts in year 1, formal hospital rotations begin in year 3 [3]. Hospital Introductory Days (HIDs) are scheduled after year 2 examinations. These take place at the hospital that the students are anticipated to undertake their first rotation, to aid in this transition. The aim of this study was to identify the self-reported concerns and objectives for medical students commencing their first clinical rotations.

Methodology:
During induction year 3 students were asked to complete a blank postcard. They were asked to state a current study concern and a study objective for the semester. These were returned to the students at the end of the semester as a stimulus for reflection. Where written consent was granted, postcard free text was collected anonymously. Thematic analysis, by means of coding the students’ statements, was undertaken. These codes were subsequently classified into themes.

Results:
Of 50 students, 49 completed the postcards and 37 consented to analysis. Four major themes emerged from this analysis: clinical behaviours, clinical skills, clinical knowledge and study skills.

Discussion:
The General Medical Council (GMC) publishes “Outcomes for Graduates” containing their learning objectives for medical students. Three of our themes align directly with those contained here [4]. Our theme of clinical behaviours sits within the GMC’s outcome 1 (Professional Values and Behaviour). Students identified issues that included dealing with uncertainty and gaining familiarity with the clinical environment. Within outcome 2 (Professional Skills), we discovered our clinical skills theme was represented. Students identified communication and clinical skills as areas provoking particular concerns or aspirations. The timely completion of the clinical skills passport (a logbook of practical procedures) was a common subject. Interestingly, both confidence and competence were described as aspirations or worries concerning practical skills. Previous studies suggest a lack of correlation between these factors [5]. Our third theme was encompassed by the GMC’s outcome 3 (Professional Knowledge). Our students identified their uncertainties of the required depth of knowledge. Surprisingly, their performance at assessment was infrequently mentioned, although this may reflect the timing of this study. Students referred to experiencing future specialities, even at this early stage. This suggests the impact of the hidden curriculum is already in play. Our final theme related to study skills, specifically ones that are different to their current toolkit. Resource management, directing one’s own learning and time management were all areas which evoked uncertainty. It is possible that the increased extraneous cognitive load associated with these changes, alongside the increased difficulty of the material (increasing intrinsic load), is sufficient to cause concern and potentially decrease the efficacy of learning [6]. The themes identified reflected the major domains of the GMC’s “Outcomes for Graduates”: knowledge, skills and behaviours. The students identified some knowledge components that sit within the hidden curriculum. The students recognised changes in the learning environment and methodology, highlighting study skills that they will need to develop. The identification of these themes will now guide the development of future HIDs.

References:

Presentation Details: Wednesday 3rd July, 5.10-5.30pm, Fyne

Page | 146
What factors contribute to becoming a doctor-in-difficulty? The perspectives of Foundation doctors.
C Jones
York Hospital / University of Glasgow

Background:
Despite success as undergraduates, up to 9% of medical trainees experience difficulties during training (1). Difficulties may be attributed of the trainee, the training programme, personal pressures or the context of learning (2). However the literature on trainees-in-difficulty can be criticised for its tendency to focus on the perspectives of trainees and programmes rather than trainees, often blaming the trainee for their failure. The purpose of this paper is to explore the perspectives of F1s about factors that contribute to being successful or unsuccessful within their Foundation programme. Their ideas are analysed within a framework based on Bourdieu’s Theory of Practice, which seeks to understand subjects’ experiences within their field of operation, based on an analysis of the relations between the agents within that field and the capitals that grant those agents authority and power (3).

Methodology:
Four F1 doctors took part in 1-to-1 semi-structured interviews based on case vignettes of successful/unsuccessful trainees. Transcripts were subjected to template analysis (4,5).

Results:
Six primary nodes (sub-nodes) of interest were identified - Ability (Clinical knowledge, Practical ability); Context of learning (Assessment/feedback/portfolio, Hidden curriculum, Sick patients, Undergraduate training, Work); Failure; Outside Work; Other people (Unpleasant people, Nursing staff, Supervisors, Support, The team); The person (Anxiety, Behaviours, Being organised, Communication, Culture, Health, Language, Pressure, Resilience, Responsibility, Tiredness). F1 doctors primarily situated themselves within their team, rather than the ward or hospital. The Foundation School was not mentioned at all. The preceding field of undergraduate education was considered to be crucial, but F1s reported significantly different experiences, particularly in regard to their exposure to practical ward-based training, aspects of which were not always part of the formal curriculum. Book-based knowledge was perceived to be of secondary, and sometimes limited, importance. Relationships with nurses and more senior trainees were important. F1s had to be well organised and good communicators in order to make these relationships succeed. Supportive middle grade colleagues were the most important mediators of success and best placed to act as mentors. Consultants were not accessible to F1s, their limited presence and fear representing the principle barriers to accessibility.

Discussion:
Despite the small sample, the purpose of this paper is to investigate the use of vignettes in semi-structured interviews to gather qualitative data about subjects’ perceptions and to analyse them within the objective setting of the workplace. Bourdieu’s Theory of Practice offers an appropriate framework for this approach. Bourdieu argued that an individual agent enters a field of practice with a habitus formed by their upbringing and prior educational experiences. The field is governed by a set of (often implicit) rules and populated by other agents, each with their own habitus and differing levels of capital, which grant them varying levels of power within the hierarchy of the field. Only those individuals entering the field with a habitus attuned to the field and its other agents, an understanding of the rules of the field and sufficient capital will prosper. A researcher can only begin to understand a field, once they have an understanding of the nature of the field, its agents and the relations between them. The analysis reported here emphasises the importance of considering the perspectives of trainees as well as trainers and institutions, as this approach may lead to different conclusions about the factors determining a successful outcome to Foundation Training.

References:
A phenomenographic exploration of widening participation students' conceptions and experiences of success at medical school.
R D'Silva, S Curtis, M Barker, J Rowland, J Cleland
University of Southampton

Background:
The current focus on widening participation (WP) in higher education is of particular concern in medicine. It remains one of the most socially exclusive professions (1,2) and medical schools have targets to increase the proportion of students from a lower socioeconomic background (3). The importance of taking a lifecycle approach to supporting WP students through higher education is well recognised (4), but there is currently a paucity of published research exploring the experiences of and outcomes for these medical students. Quantitative data analysis from two bespoke WP ‘Gateway’ medicine programmes, the BM6 programme at Southampton and the EMDP programme at King’s College London, identify 7% lower overall student success rates in comparison to their traditional entry equivalents (5), and the reasons for this are not yet clear. This study uses a phenomenographic approach to explore the qualitatively different ways in which Gateway programme students conceive ‘success at medical school’ and make sense of their progression through the programme.

Methodology:
A phenomenographic analysis of 15 semi-structured interviews with undergraduates from an established Gateway medical degree programme. A maximum variation sample was sought by inviting students from all years to participate, with snowball sampling used to follow up further participants.

Results:
Five main conceptions of success at medical school were identified from participant responses: 1) it is passing exams; 2) passing exams is not enough, it is being a good doctor; 3) it used to be about passing exams but; 4) unique personal achievement; 5) happiness and contentment. Students interviewed in the first year of the programme, and senior students interviewed just before important exams more frequently expressed that the most important aspect of success was passing exams, while clinical medical students often articulated the conception that passing exams is not enough unless one is also a good doctor.

Discussion:
Widening participation should concern more than merely enabling access to medical school, but encompass progression through it and entry into the medical workforce. In line with guidance from the Medical Schools Council (6), this analysis is a step towards better understanding of medical school progression experience for those from WP backgrounds. It suggests that students see exam results as important, especially when they have particular career aspirations, but that their understanding of success changes over time at medical school, especially when they approach graduation. It is important to recognise that an understanding of success is unique to each student, but usually includes more than simply academic achievement.

References:
4. OFFA and HEFCE. National strategy for access and student success in higher education. London: Department for Business, Innovation and Skills 2014

Presentation Details: Wednesday 3rd July, 4.10-4.30pm, Carron 1
Do Gateway courses support underrepresented students achieve their potential? A comparison with students on standard medical degree courses.
S Curtis, D Smith
University of Southampton

Background:
Gateway courses are increasingly popular widening participation (WP) routes into medicine, designed to attract and retain students under-represented in medicine in the UK, especially those from low socioeconomic backgrounds. These courses provide a more accessible entry route into medical school and aim to support students successfully progress through their studies and graduate as doctors. There is little evidence on the performance of students on Gateway courses and whether these courses support students to achieve their academic potential. This study compares the attainment and aptitude on entry and outcomes at graduation of students on the UK’s three longest running Gateway courses with students studying on a standard entry course at the same institutions.

Methodology:
Data from the UK Medical Education Database (UKMED) were obtained for the three longest running gateway courses and standard entry medicine (SEMED) courses at the same institutions, for students starting between 2007 and 2012. These data included A-levels and UK Clinical Aptitude Test (UKCAT) scores on entry to medical school and Educational Performance Measures (EPM), Situational Judgement Test (SJT) and Prescribing Safety Assessment (PSA) scores as outcomes measures. 4,471 students completed their entire medical degree at the same medical school on a SEMED or Gateway course. 3,638 had one or more of the three outcomes on graduation and were included in the analysis to determine performance and whether course type predicts EPM, SJT and PSA scores after controlling for attainment and aptitude on entry.

Results:
Students on the SEMED courses had higher attainment (A-level points, Cohen's d = 1.338) and aptitude (UKCAT test scores, Cohen’s d = 1.078) than those on Gateway courses on entry. On exit SEMED students had higher mean EPM scores (Cohen's d = 0.616) and PSA scores (Cohen's d = 0.653) compared with Gateway students. Undergoing a SEMED course is associated with higher EPM scores (accounting for 6.5% of the variance) and higher PSA scores (accounting for 6.5% of the variance) with no control for entry measures. When accounting for measures of attainment and aptitude on entry, course type is still a significant predictor of EPM (but only accounts for 1.8% of the variance) and PSA (but accounts for less than 1% of the variance). There is a smaller significant difference in SJT scores between SEMED and gateway students (Cohen’s d = 0.114). Higher SJT scores are associated with course type when performance on entry is not controlled for but when measures of performance on entry are included course type is no longer significant as the variance in SJT scores is explained by A-levels, which co-varies by course.

Discussion:
Students on SEMED courses have higher scores on entry to medical school than SEMED students, which is congruent with the entry criteria. However, there is a smaller difference in performance on exit than seen at entry between the two courses. This could indicate that students on Gateway courses show improvement in performance at medical school. Students on SEMED courses demonstrate better performance in EPM and PSA assessments. However, a reduction was seen in this effect after accounting for initial attainment and aptitude. After accounting for attainment and aptitude, course type was no longer a significant predictor of SJT scores indicating similar performance in non-academic assessments for students on both courses. Students from underrepresented groups may demonstrate lower attainment on entry but they also show improvement in performance at medical school narrowing the gap with SEMED students. This indicates gateway programmes do help students achieve their potential.

References:
Enhancing the Test Security of a High-Stakes Mass Online Test

P Antonacci, C Zou
Altus Assessments

Background:
Online testing has greatly widened access for students, allowing a large number of test-takers to complete assessments from any corner of the globe. Recent advancements in technology have also opened the door to deliver high-stakes testing in an online platform. CASPer is one example of an online high-stakes test used in medical education for admission purposes. The assessment is a situational judgement test (SJT) that has quickly gained popularity in North America, where over 80% of medical students in the United States will have completed the test at some point during the admissions process. CASPer is an assessment of non-cognitive competencies to complement the cognitive metrics during the medical school admissions process [1]. By the end of 2018, over 125,000 applicants have completed the test from 128 different countries, which is only feasible when the test is administered online, bypassing the need for testing centers. However, as the number of test-takers increases, so does the potential for students to game the system and possibly breach test security. In this presentation, we will go over a number of ways in which the test security of CASPer has been enhanced over the years, and demonstrate the impact these enhancements have had in deterring cheating. These enhancements can potentially be used for educators and test administrators who are currently or are interested in conducting online testing to preserve the integrity of their assessments.

Methodology:
We conducted a scoping review to examine various ways in which other online assessments have increased the security of their test to thwart online exam cheating [2]. Additionally, we have also adopted various test parameters that also help reduce the effects of item preknowledge, to minimize any advantages that might be gained if a student somehow knew the test items beforehand. Additionally, we took advantage of various technological advancements to further increase test security using natural language processing (NLP), machine learning (ML), facial detection, and keystroke signatures.

Results:
The list below describes some of the ways in which the test-security of CASPer has been enhanced:
- The shift from traditional multiple-choice questions to an open-ended question format, which reduces the effects of coaching and practice effects
- Requiring test-takers to complete the assessment during a specified time
- Randomizing the presentation of items so that students are presented with questions in varying orders
- Restricting the time limit of the assessment so students do not have the time to corroborate answers or refer to external sources
- The requirement of a webcam to ensure that the face of the test-taker matches the government ID uploaded by the student
- The addition of a peek feature to continuously monitor students throughout the test to detect aberrant test-taking behaviour
- Utilizing NLP and ML to detect response similarity across test-takers in the case of students who attempt to copy another students’ answers
- Continuous monitoring of the web to detect sharing of test items on popular social media forums and websites
- Collecting keystroke signatures to match the keystroke patterns of students who complete the assessment and sign up to take the test

Discussion:
With the addition of these security features, we were able to detect hundreds of students who were caught attempting to game the system. However, the prevalence rates of cheating were generally low, which is consistent with previous findings from the general literature [4]. Furthermore, the impact of cheating has been shown to have less of an impact on non-cognitive tests in comparison with cognitive assessments [5].

References:
Evaluation of the Objective Structured Knowledge Assessment (OSKA) - a novel formative assessment tool.
AT Misky, AH Sam, K Meeran
Imperial College School of Medicine

Background:
Being able to summarise and verbalise clinical findings in order to formulate a diagnosis is a regularly used skill in the clinical environment, that junior doctors learn on the job and students learn by observation. The ability to explain diagnoses and treatments to patients is a core skill for all doctors. Assessment of medical students’ ability to verbalise their knowledge is minimal in undergraduate examinations. The importance of asking questions to enhance teaching sessions for medical professionals has been recognised in educational literature. (1) Increasing clinical service pressures have led to a decline in clinical encounters where students are exposed to this style of learning. (2) We developed a formative assessment tool, the Objective Structured Knowledge Assessment (OSKA), where students are asked questions relating to specific clinical topics and scenarios, and encouraged to articulate their thinking process. In this study we aim to evaluate students’ perception of the OSKA compared to traditional clinical teaching encounters (e.g. clinics, ward rounds, theatres etc.)

Methodology:
Students completed an anonymous questionnaire of 13 questions relating to student satisfaction, clinical and curricular relevance, and feedback compared to traditional clinical teaching immediately after the OSKA session. Answers were collected using a five-point Likert scale.

Results:
One hundred twenty-five students (41% of the year group) answered the questionnaire. 97.6% of students were very satisfied or satisfied with the general quality of the session. 99% of students thought the topics discussed were clinically relevant. 79.2% of students felt more at ease and 84.8% felt more engaged by the session than available conventional clinical teaching. 82.4% of students felt the quality of feedback and 85.6% of students felt the quantity of feedback received was better than at available conventional clinical teaching sessions.

Discussion:
Students satisfaction with the OSKA was excellent and an overwhelming majority of students felt this session was in some respects superior to the available conventional teaching for their learning. OSKAs may therefore be an excellent complement to teaching sessions at clinical placements, which remain the gold standard. Further steps in this study will include the formal analysis of correlation between students’ scores in the OSKA and single-best-answer questions.

References:
1. Hausmann JS and Schwartzstein RM. Using Questions to Enhance Rheumatology Education. Arthritis Care & Research. 2019. Accepted Author Manuscript. DOI:10.1002/acr.23753

Presentation Details: Wednesday 3rd July, 4.50-5.10pm, Carron 1
Feedback in Medical Education: Student satisfaction vs improvement in clinical skills, A randomised controlled trial.
H Stevenson, I Davison
University of Birmingham

Background:
Providing feedback is the cornerstone of providing effective teaching allowing us to both encourage good practice as well as improving our knowledge and clinical skills. Many different methods of delivering feedback have been discussed in the literature but it remains unclear if one method is superior to another in both encouraging student satisfaction with the feedback whilst also developing them as clinicians. The aim of this study was to design a clinical trial to determine how students perceive different formats of giving feedback and whether student satisfaction with the feedback correlates with an improvement in their clinical skills.

Methodology:
12 students attended a clinical skills suturing session. They all completed a baseline assessment of suturing skills. Six students were then randomised to receive positive comments as feedback and six students were randomised to receive more comprehensive reflective, learner-centred feedback. Feedback for both groups lasted 5 minutes. After the feedback all students completed the same clinical skills assessment and completed an anonymous questionnaire assessing their satisfaction with the feedback and self-evaluation of improvement in clinical skills. Video tapes of the suturing assessment pre and post feedback were reviewed and scored by three separate assessors who were blinded to the student and the type of feedback they had been given.

Results:
Overall across both groups 92% of students were either satisfied or highly satisfied with the feedback they received and 100% of students felt the feedback had improved their clinical skills and confidence in suturing. There was no statistical difference in satisfaction between the two different feedback groups. In the group who received reflective feedback the increase in performance score's for the assessment after feedback was significantly higher than in the positive comments feedback group (p=0.001).

Discussion:
Students have similar levels of satisfaction with feedback whether this involves only positive comments or if it takes the format of more reflective, comprehensive and learner-centred feedback. Providing reflective feedback significantly improves the performance and skill of the student and is therefore more beneficial as a method of providing effective feedback. This can be easily given within a 5 minute time-frame without affecting student satisfaction. A further larger-scale trial will be required to evaluate this further.

Presentation Details: Wednesday 3rd July, 5.10-5.30pm, Carron 1
Information seeking behavior of medical undergraduates, Sri Lanka
MPLR Marasinghe, MN Chandratilake, KTAA Kasturiratne
Faculty of Medicine, University of Kelaniya, Sri Lanka

Background:
Information seeking is a fundamental intellectual activity that facilitates problem solving, decision making, and knowledge creation (1), which are essential attributes of good medical practitioners. Information seeking behavior involves identifying needs, searching approaches and the use of information (2). This study aims to explore the information seeking behavior of the medical students in Sri Lanka.

Methodology:
A qualitative study, using focus group discussions, was conducted with 85 final year medical students of four universities in Sri Lanka. Male to female ratio was 47:38 and the average age of participants was 26.1 (Range: 24 to 29). All focus group discussions were audio-recorded and the records were transcribed verbatim. Thematic analysis of content was carried out using Richie and Spencer framework as the basis (3).

Results:
The themes identified varied from conceptualization of information seeking behaviours to needs, strategies, barriers and facilitators. Students use limited sources of information in classroom-based learning and they confine mainly to material provided by teachers, i.e. teacher-directed behaviour (“Lecturers guide us and give reference materials to refer. We tend to seek information based on their recommendations.”). This was primarily driven by exam-orientation and the belief of learning (“We seek information to target our exams and we do not go beyond that.”). They seek information external sources, e.g. web, while they learn in clinical environment, i.e. self-directed behaviour, as they face with more uncertainty in learning. Web sources used ranged from informal sources (“Most instances I use Wikipedia for convenience sake.”) to standard sources (“We find information from Medscape, otherwise we refer Radiopaedia or Up To Date.”). Although the participants were millennials some tend to prefer printed material which gives them a higher sense of ‘confidence’ (“Personally I prefer to have printed materials and use textbooks because I can understand better from textbooks.”). The role of a traditional library seems to be weaning-off with smart phones and tablets gaining popularity (“We normally use mobile phones and tablets for seeking information, not the library.”)

Discussion:
The primary orientation of information-seeking is academic needs. Learning environment and its level of intellectual challenge sophisticates the process; teachers and teaching play a vital role in widening the scope of information-seeking.

References:
Using student feedback to enhance internal OSCE consistency
Z Noonan, L Pope
University of Glasgow

Background:
The OSCE is considered the gold standard in performance-based assessment of clinical competence. The format of the OSCE, which at Glasgow requires the use of multiple circuits across different sites on sequential days, coupled with a desire for assessment standardization, leads to a much greater potential for information transfer between candidates than in other forms of assessment. In order to minimise the opportunity for exam candidate collusion, the strategy employed at Glasgow medical school since the academic year 2017/18 is to quarantine students during OSCE periods. An unanticipated effect of the introduction of quarantining at Glasgow was a significant rise in the number of student complaints received about the exam.

Methodology:
Prompted by the increase in student complaints about the OSCE process this year, the Glasgow OSCE team developed a protocol for the investigation of these (1). Our fundamental premise in reviewing any complaint is that a student should not be disadvantaged by an error in OSCE process or procedure. A framework to evaluate discrepancies in the OSCE experience was compiled, to enable a consistent and robust investigative approach to reviewing these. This study will present qualitative and quantitative data subsequent to the development of the protocol to enable reflection on the implementation of this to date (at the time of writing the abstract qualitative information is not available from the exam diets due to run shortly, but will be added to results section before the ASME dates).

Results:
Using the protocol the assessment team were able to identify four key areas where OSCE standardization could be improved. These were: 1) Student specific issues - such as individual student issues with using equipment or practical performance of station tasks; an example would be a student who was unable to adjust the bed height and felt that this impacted on the adequacy of cardiac compressions in a resuscitation scenario. 2) Examiner specific issues - this area covered any issue related to examiners, for example examiners forgetting to provide question material appropriately, or any deviation from scripted station questions. 3) Question specific issues - comprising any mark sheet issues, or a lack of clarity in station setup, or task instructions, for example 4) Site specific - this aspect covered problems with noise at a specific OSCE site, variations in actor or simulated patient performance, or faulty equipment at a site. Classification and review of these issues in a systematic way has enabled developments and improvements to the OSCE process at Glasgow. Station requirements and set-up information have been updated and reviewed for all questions. Examiner training content has been refined and developed, and our examiner briefing material updated. Hospital sub-deans have been appraised of any issues relevant to their site. The protocol used to investigate student complaints has been shared with all students in their pre-examination briefing material.

Discussion:
We anticipate a reducing number of student complaints with each OSCE diet, as a result of the interventions detailed above. The expectation is that by detailing both the process of investigation and the potential outcome of OSCE issues students will feel reassured and confident in OSCE procedures. By learning from, and responding to, student feedback about the OSCE experience at Glasgow we anticipate that in time we will ultimately enhance the reliability and validity of our OSCE. In addition, we are confident that we have improved our examination consistency and delivery with the changes made this far.

References:

Presentation Details: Thursday 4th July, 2.00-2.20pm, Carron 1
Utility of Practicum Script, a clinical reasoning simulator in undergraduate education
AH Sam, CF Collares, A Freeman, E Hornos, C Van der Vleuten, EM Pleguezuelos
European Board of Medical Assessors

Background:
Current tools for assessing applied knowledge in undergraduate medical education are limited in their scope for testing clinical reasoning and the ability to manage uncertainty in clinical practice. (1-6) Practicum Script (http://www.practicumscript.education) is an online simulation-based program aimed at enhancing clinical reasoning and problem solving skills as well as introducing the concept of uncertainty for decision-making. (7,8) This multicenter pilot study, coordinated by the European Board of Medical Assessors (EBMA), aims to investigate the utility of Practicum Script as a clinical reasoning training tool in undergraduate teaching and assessment.

Methodology:
It is envisaged that four UK medical schools (Imperial College London, University of Exeter, Plymouth University, and Newcastle University Medical School) as well as medical faculties from European countries will take part in the study. The assessment material for the study will consist of 20 clinical cases mapped to key topics in internal medicine. Cases developed by the editorial team will be reviewed by a reference panel consisting of internal medicine experts from the participating faculties who will provide answers to the questions and their rationales for each response. A Literature review of the clinical evidence relevant to the experts’ judgments will also be performed. For each clinical scenario, final year medical students will be asked to generate hypotheses in ‘free-text’ format and justify them by identifying pertinent positive and/or negative findings in the case. Subsequently students will need to report, in five different clinical scenarios, how new data may affect their original hypotheses. Feedback for the participants will be based on the summaries of experts’ answers and justifications, along with the clinical evidence base from the literature. Students will also be able to see the concordance between their responses and those of the experts.

Results:
We aim to perform psychometric analyses of the students’ answers to the items for each case. Student satisfaction and perceptions about the educational model will be also be evaluated.

Discussion:
Practicum Script may be a valuable undergraduate educational resource for assessment of clinical reasoning and medical students’ ability to manage uncertainty in clinical practice.

References:

Presentation Details: Thursday 4th July, 2.20-2.40pm, Carron 1
A construct for nearness in near-peer learning: The experience of undergraduate medical students situated in GP practices with doctors in training.

RW Spiring
Barts and the London School of Medicine and Dentistry

Background:
With the urgent need to address medical students recruitment to a career in General Practice the use of GP doctors-in-training (GP registrars) as educators in the workplace has been proposed as important in their capacity as near-peer educators (1). The problem that exists is how medical students may understand GP registrars as near-peers, given that GP registrars are some years more experienced as professionals than undergraduates and at a different stage in professional training. The work presented forms part of a master's thesis in Medical education and discusses the construct of 'nearness' and how this may be viewed as having several dimensions. Overarching research question: “How do medical students understand their experience of being taught by GP Registrars in community based medical practice?” More specific questions: -Are medical students’ experiences of GP registrar teaching the same or do they differ from being taught by senior GPs? -What are the characteristics of GP registrars as teachers that students view as important for their learning? -Does their view of GP registrars approximate to ‘near-peer’ teachers?

Methodology:
I explore 21 medical students’ experience of working with GP registrars and how they view them as teachers on their General Practice placements through semi-structured group interviews at the institution where I work. Using Template analysis (2) as a sole researcher I make meaning of the data and explore the themes through summarising the qualitative data from these interviews. for this presentation I draw on the data which may give insight into how students experience learning encounters with GP registrars.

Results:
Students negotiated their way through the workplace. Participation was a key part of their ideas about what learning was and linked with the belief that knowledge gained by experience helped to make sense and use knowledge from ‘text books’. Students balance ‘real’ medicine with what they needed to know in their medical student world that may be more up-to-date, thorough or ‘by the book’ than the ‘real’ practice, particularly with reference to the OSCE. Nearness had some different dimensions- knowledge nearness, power nearness and generational nearness. Nearness linked with this balancing real life knowledge with what they needed to know in their world, negotiating participation in a two-way quid pro quo, and less high stakes feedback in the learning environment. GP registrars functioned as near-peer learners in many of the above respects, although they were not universally recognized as different to senior GPs before undergraduates had experiencing of working with them in practice.

Discussion:
How medical students experience of near-peer learning may be viewed through a construct of three dimensions of ‘nearness’. This is discussed in relation to the literature and in particularly the ideas of cognitive and social congruence (3,4) and social learning theories such as Lave and Wenger (5) Nearness may be imagined as a multidimensional construct including aspects of knowledge nearness, power nearness and generational nearness. GP registrars are ‘nearer’ to medical students in some of these than others. In particular they are seen to have nearness of knowledge but are not so near in regard to power. Suggestions are made to enhance nearness and utilise near-peer learning in the practice. These include the intentional signposting of GP registrars as near-peers and introducing their role in the team and their previous ‘near’ experience to medical students as part of placement induction. This promotes generational and knowledge nearness. Facilitating explicit discussion with students about how they can actively participate in the workplace including addressing how they view the ‘cost’ of their teaching in terms of time and other effects on the workplace helps students access learning opportunities. How these suggestions are best applied is a potential focus for further work in the field.

References:

Presentation Details: Thursday 4th July, 2.40-3.00pm, Carron 1
Undergraduate Medical Education - Teaching & Learning

Achieving complex clinical learning outcomes through humanities-based approaches
K Leedham-Green, F Zahra, K Dunton
King’s College London

Background:
There is a dissonance between science-based medical education and humanistic clinical practice (1,2). Educational methods, particularly assessment culture, can encourage a belief that there is a single right answer to any question, or an objective measure of competency. Clinical practice is however suffused with humanistic characteristics: uncertainty, psychosocial determinants of health, trust, a shifting evidence base, empathy, resilience, critical thinking, team working, complex trauma, and occasionally grief. The recently published GMC Outcomes for Doctors 2018 (3) has many high level learning outcomes that emphasise the complexities of clinical practice. There is interest in how the pedagogies of the humanities might support students in complex clinical learning (1,4). This study aims to analyse what clinically relevant learning happened as a result of a primary-care based humanities assignment.

Methodology:
400 medical students at a UK medical school were required to submit a reflective learning account following a team-based humanities assignment. The assignment was situated in general practice where students had spent one day each week studying in groups of approximately eight. 311 students consented for their reflective learning accounts to be analysed. A random selection of 30 essays were coded for content until saturation was achieved. Content that related to clinically-relevant learning was mapped where possible to GMC Outcomes for Doctors 2018. The project arose from a collaboration between the Cultural Institute and School of Medical Education at King’s College London, with leadership input from the Dental Institute and Centre for Humanities and Health. Humanities experts and clinicians worked together to support teams of year 2 students in achieving clinical learning outcomes through humanities-based approaches. Teams of approximately eight students were asked to identify a topic that was important to them, and were supported in exploring it through humanities-based approaches. Two student volunteers from each team attended a planning workshop in term 1 and a review workshop in term 2. Humanities experts included a poet, a graphic artist, a visual artist, a textile artist, and an art historian. Workshops were also supported by a clinician educator and a senior medical students with an interest in the humanities. All students had a practice-based session and two sessions of allocated study time to complete the project. Teams submitted their final outputs in term 3 to their GP tutors, alongside a reflective portfolio entry. Engagement was encouraged through prizes and an exhibition.

Results:
We present a coding frequency chart which emphasises complex learning outcomes such as team working, working with vulnerable patients, the social determinants of health, practitioner well-being and resilience, conceptions of aging and frailty, professional identity and healthcare equity. Students used their humanities assignments to view their experiences of healthcare and medical education through both appreciative and critical lenses. There was evidence of transformative learning across a range of domains.

Discussion:
Complex learning outcomes are increasingly valued in medical education, relating to rising care complexity and the realities of humanistic clinical practice. These outcomes are difficult to define, let alone teach or assess. The pedagogies of the humanities, which emphasise creativity, criticality, and difference of approach might support students in this aspect of learning. We have demonstrated which learning outcomes students have achieved through humanities-based approaches in our context.

References:

Presentation Details: Thursday 4th July, 3.00-3.20pm, Carron 1
An exploration of the implications of employment for medical students. A comparison of widening participation students to traditional entry students.

M Anane, SA Curtis
University of Southampton

Background:
There are large financial pressures on medical students with four-in-ten wanting to leave their studies or knowing someone else who does, due to financial difficulties1. Current evidence indicates that for students in higher education working over twenty hours a week alongside full-time study is negatively correlated with exam performance2. However, research into the working hours and patterns, as well as the experience and impact of part-time employment, of medical students is limited. UK medical schools are striving produce a more diverse and representative workforce through widening participation of students from socially and educationally disadvantaged backgrounds. It is imperative to consider the student’s individual circumstances, including their financial status, in order to support their progression through medical school. In particular, widening participation students (WPS) who may already face reduced financial support are more likely to be required to work whilst studying3. In order for medical schools and other relevant bodies to support all students effectively, a greater understanding of the impact of their financial status and part time employment on the student experience is required.

Methodology:
Aims: To investigate potential differences in paid employment for WPS and traditional entry students (TES) and explore its impact on the student experience. A questionnaire was developed in consultation with the University of Southampton’s Student Services. An online questionnaire was distributed to medical students. Paper copies were made available in lectures. The questionnaire responses informed the development of the semi-structured interview framework. These interviews were undertaken to explore the research topic further; these were digitally recorded, transcribed and analysed using inductive thematic analysis.

Results:
Questionnaire responses (N=200) showed 76% of TES students and 84% of WP students were employed whilst at medical school. TES were more likely work during holidays only compared to WP students who worked in the term and holidays. Eleven interviews were undertaken and analysed. Overall, there were largely similar themes but different codes, with some areas contrasting significantly, for each programme. The main shared themes were; Money, Employment, Choice and Impact on Self, Emotions and Impact on University Experience. Themes exclusive to WPS were Impact on Studies and Financial Support. Differences between the groups were highlighted in the theme: Money, where students financial status and attitudes were explored. TES highlighted disposable income, sources of money, support from home and savings whereas WPS highlighted budgeting and financial worries, family circumstances and attitudes towards spending. One unique theme to WPS was financial support, highlighting a common but unexpected reason for working. WPS expressed being a source of financial support to their families and partners. As a result, some WP students reported feeling a lack of understanding from medical professionals and academics surrounding their situation. Also highlighted by some WPS was how difficult they found it to balance their work/life/study, resulting in serious financial hardship or compromised mental health.

Discussion:
The majority of medical students work whilst at medical school but there are differences in necessity and motivation. WPS are more likely to be motivated and required to work for financial need. TES are more likely to be motivated by the skills gained from employment. The necessity of working related to the hours worked, with WPS students working more near exam time, which negatively affects their studies. With the current aims of attracting more WPS to study medicine it is crucial for medical schools to understand the impact of financial pressures on the ability to study and the general student experience to be able to provide the appropriate support for optimising progression and retention.

References:

Presentation Details: Friday 5th July, 9.00-9.20am, Carron 1
An Innovative Teaching Approach for the Clinical Assessments of Wounds.
C Oliver, A Gosal, P Davies, A Samuels
Gloucestershire Academy, University of Bristol

Background:
The cost of wound care and wound management in 2013 was estimated to be costing the NHS £5.1 billion. (1) It is therefore important that we fully prepare our future clinicians for an important and costly area of clinical practice within the NHS. Medical schools across the UK are on average providing only 4.9 hours of wound related teaching to their undergraduate medical students during their five year programmes. (2) With limited hours within the curriculum for such a prevalent topic it is vital that teaching sessions dedicated to wounds are effective for the students. There has been some research into the use of virtual reality and competence based curriculums in improving outcomes regarding wound teaching, however there are limited results available. (3,4) The aim of this study was to introduce an innovative approach to teaching the clinical assessment and diagnosis of wounds to fifth year medical students at the University of Bristol. This teaching programme approach aims to improve both students’ clinical ability as well as their confidence in the diagnosis and management of wounds.

Methodology:
Fifth year medical students based at the University of Bristol were invited to take part in a ‘Diagnosis and Management of Wounds’ teaching session. Students were randomly assigned to the intervention group or control group. All students undertook a pre-assessment exam based upon the Bristol Clinical Data Exam to establish their baseline knowledge. They were also asked about their confidence in wound diagnosis and wound management through a questionnaire. Both groups were shown the same PowerPoint presentation about how to approach and describe wounds and examples of five wounds included in the undergraduate curriculum. The intervention group were also given an instruction card containing information about each wound and instructions on how to make them using modelling equipment provided (modelling clay and fake blood). They were asked to create their wounds during the session and then asked to present their wound using a systematic approach to the rest of the class. Following the teaching session both groups underwent further examination based upon the Bristol Clinical Data Exam and were asked for qualitative feedback about the sessions.

Results:
18 students took part in the study, 9 in the control group and 9 took part in the innovative teaching programme (intervention group). The intervention group showed an increased improvement between their pre and post assessment score of 30%, compared to only 17% in the control group. The intervention group also expressed improved self-confidence in their sport diagnosis and management of basic wounds when compared to the control group. Qualitatively the students also reported positive feedback about the new approach including; “making a model definitely makes it more memorable”, “there are subtle differences in the appearance of ulcers, using the models helped to differentiate between them” and “repetition through varying means is helpful ... better than any other way I’ve tried”.

Discussion:
This interactive and innovative approach to teaching wounds to undergraduate students has demonstrated an improvement in both the understanding and knowledge of wounds and an improvement in self-confidence. By using simple materials, modelling clay and fake blood, this study has taken a didactic teaching approach and effectively made it more engaging and memorable for the students with beneficial results. With such limited time allocated within the Undergraduate Medical Education curriculum this simple change in teaching style could have a wider impact on wound care within the NHS if other Universities were to adapt this method. This additional kinaesthetic element would also be transferable to other specialities taught within medical education, such as surgical anatomy.

References:
**Are puzzles a valid tool in medical education?**

**A Tebbett**

University Hospital Coventry and Warwickshire

**Background:**
Medical education has moved away from the traditional lecture; educators now need to consider innovative and creative supplements to facilitate active learning (1). The use of educational puzzles (such as crosswords and wordsearches) has been introduced to medical education but current research largely analyses their role in isolation. For example, one study assessed if the students found crossword puzzles useful using a ‘yes’ or ‘no’ response, and reported that 88.5% found them useful (2). Another study explored if crossword puzzles could improve knowledge and found a significant improvement in post-crossword test scores, though only 71.43% of students agreed that it had enhanced their learning (3). Little research has been done to test student’s perspectives of the use of puzzles in education with regards to their relevance, usefulness, knowledge or enjoyment in comparison to more traditional methods of learning. This will help assess the face validity of puzzles in medical education.

**Methodology:**
All final year medical students from Warwick University rotating through the Acute Block as part of their training between August and December 2018 were offered tests on a voluntary basis after sitting two compulsory afternoon tutorials. Three groups of students totalling 55 were eligible, though not all attended the tutorials. After Tutorial 1 the test was in the form of puzzles. These included a word search, a crossword, annotating diagrams, completing tables and solving anagrams. After Tutorial 2 the test was in the more traditional short answer question format. After each test the students were given a survey to complete. The survey assessed their opinion of the usefulness, relevance, fun and the impact on knowledge of the test using a 5 point Likert Scale. Responses to the two tests were then compared using an unpaired t-test, due to the unequal sample sizes.

**Results:**
A total of 46 students attended Tutorial 1 of which 31 stayed to do the puzzles (67%). 47 students attended Tutorial 2 and all chose to stay and complete the short answer questions (100%). Statistically significant differences were found in how useful (61% vs 96%) and relevant (65% vs 98%) the students found the puzzles compared to the short answer tests (p 0.0001). A similar difference was found when asked if they thought the test improved their knowledge (52% vs 89%, p 0.0001). When comparing how fun the students found the test, no significant difference was found (74% vs 67%, p=0.4077). Overall, students rated the short answer test more positively (89%) than the puzzles (63%) to a significant extent (p 0.05).

**Discussion:**
The students in this study clearly favoured the traditional short answer test in comparison to puzzles. The percentage of students who agreed or strongly agreed about the usefulness, relevance and impact on knowledge of puzzles was lower in this study than in other published data. A few reasons for this have been considered. Firstly, these puzzles were done after an afternoon of three tutorials, which closely followed a morning of lectures. A large proportion of the students were tired and required encouragement to complete the puzzles. The puzzle book, in order to include different types of puzzles, was also quite long and took an average of 35 minutes to complete. The short answer test was a lot shorter in comparison. This could have affected their positivity towards the test. A further consideration is that the final exams the students sit has a short answer component. Testing their knowledge in the same format as their exams may have affected their attitude towards the test, resulting in a more positive attitude to that which they are familiar with. This study showed that currently puzzles are not viewed as positively as short answer questions as an educational resources to test or improve knowledge. A few reasons for this have been discussed. Further research is needed to look qualitatively as to why, as well as canvassing a larger group for their opinions.

**References:**

**Presentation Details:** Friday 5th July, 9.40-10.00am, Carron 1
Arts and Humanities in Undergraduate Medical Education, a Survey of UK Medical Schools
L Revell, A Blythe
University of Bristol

Background:
The General Medical Council Outcomes for Graduates demands more from medical graduates than application of biomedical scientific principles (1). Graduates must also have good interpersonal skills, an ability to deal with complexity and uncertainty and the ability to apply psychological and social science principles in care for patients. There is evidence that study of the arts and humanities may help address some of these areas. In a survey of students from five USA medical schools Mangione et al. found that exposure to humanities was correlated with increased empathy, reduced intolerance of ambiguity and reduced emotional exhaustion (2). Currently there are no published data about the extent to which arts and humanities are used within UK undergraduate medical curricula. This study explores the current use of arts and humanities in UK medical schools, including the goals associated with these learning activities, their perceived value within the curriculum, student reception and challenges to delivery.

Methodology:
A 26-item (6 required items and 20 optional) survey was developed and circulated to 33 UK medical schools to collect both quantitative and qualitative data about their current use of arts and humanities in their undergraduate curricula. Qualitative data from the survey were analysed through thematic analysis.

Results:
Responses were received from 27 out of 33 medical schools (response rate 82%). 70% (19/27) of responding schools have arts and/or humanities teaching within their core undergraduate medical curriculum. 89% (24/27) medical schools reported offering optional arts and/or humanities within their undergraduate medical curriculum. Only two schools (7%) reported not offering any arts or humanities anywhere in their core or optional curriculum. Data were collected about the arts and humanities disciplines included, which years of the curriculum this occurred in, who delivered the teaching and whether it was assessed. Medical schools reported several goals associated with the arts and humanities learning activities within their curricula. Thematic analysis of these responses identified common themes including broadening of student education, improved understanding of patients and their experiences, development of empathy and compassion, improved reflection, improved tolerance of uncertainty and improved student well-being. Arts and humanities seem highly valued by medical schools. Several respondents commented that these learning activities fulfill an essential and otherwise unmet learning need. Student response was described as good or mixed. Examples of both positive and negative feedback were provided by medical schools. Medical schools reported several challenges to implementation or expansion of arts and humanities within their curriculum, with lack of curriculum time being the biggest perceived barrier (21/27; 78%). Despite this over half of responding schools reported plans to expand the presence of arts and humanities within their undergraduate curricula.

Discussion:
Arts and humanities elements are included in the core and or optional curriculum of most UK medical schools although there is a great variety in how these are used, and the types of learning activities offered. It is notable that many of the goals for these activities do align with Outcomes for Graduates, including some of the potentially harder to reach areas. All schools perceived challenges to inclusion or expansion of arts and humanities within the curriculum. Given the important goals and the high value reported by respondents, should there be a conversation about whether use of arts and humanities should be promoted and expanded and ideas shared among medical schools?

References:

Presentation Details: Friday 5th July, 10.00-10.20am, Carron 1
Balancing the balance sheet – An innovative technique to teach entrepreneurial skills to dental students
P Eachempati, S Kumbargere, K Kumar, AR Hj Ismail
Faculty of Dentistry, Melaka Manipal Medical College, Melaka, Malaysia

Background:
Teaching and assessment of entrepreneurial skills[1,2,3,4] remains a challenge in an already crowded curriculum. Various methods like project works, lectures, private clinic visits have been employed to train undergraduate students in entrepreneurial skills[5,6,7,8]. However, simulation based teaching has not been reported. “Balancing the balance sheet” is an innovative simulation based teaching model.

Methodology:
Specific objectives:
1. To compare the frequency of students with profit/loss over a period of 3 months.
2. To compare the profit scale of the students over a period of 3 months.
4. To evaluate perception of faculty and students regarding the intervention.

75, year 5 dental students had to treat 15 cases each of varying dental conditions. They were asked to plan the required dental materials and indent for them. Dummy currency was given to buy the materials. Materials were issued based on their indent and the students paid the fake money for the same. Each student was asked to maintain a balance sheet. The total amount spent, amount gained in terms of treatment charge and amount saved in terms of materials saved by each student was calculated along with assessment of case completion.

Results:
We compared the frequency of students with profit/loss over a period of 4 weeks. In the first week 80% of the students showed loss. Improvement was seen over the four-week period and students became more accountable for their materials. There was cost awareness created as the students purchased their own materials and a great reduction in wastage was noted.

Faculty felt that this was a good starting tool to train students regarding private practice management. Students perceived that their knowledge regarding cost of various materials improved and felt this technique should be introduced early in clinical years.

Discussion
There was increase in the frequency of students with profit and decrease in loss over a 4-week period. The frequency of students with profit < 50% was more. Faculty perceived students to have a positive attitude towards resource management. Students perceived the innovative teaching methodology to be effective.

With the successful implementation of this innovative simulation teaching methodology, we intend to use this as a regular exercise to train undergraduate dental students in material management.

References:
1. JSSATEN | OBE @ JSSATEN [Internet]. Jssaten.ac.in. 2017 [cited 5 April 2017]. Available from: http://www.jssaten.ac.in/About_OBE.php

Thursday 4th July 2.40-3.00pm Carron 2
Can we improve the quality and quantity of feedback obtained by University of Manchester 4th year medical students in a musculoskeletal health block?

L Gray, J Oldbury, E Bruce, P Watson
Wythenshawe Hospital

Background:
The value of high-quality feedback in undergraduate education is well recognised (1,2,3,4). However, student experiences of the feedback process can be variable and where poor feedback is perceived by learners, this may not only lead to student dissatisfaction but also poorer levels of clinical competency among undergraduates (2,3,4).

In 2016, an evaluation of student perception of quantity and quality of feedback received in a musculoskeletal health block was undertaken at Wythenshawe Hospital. Results demonstrated that approximately half the students completed the recommended number of case histories from which to receive feedback and less than a third of students received good quality feedback reinforcing good practice whilst identifying areas for improvement (2). Subsequently, improvement strategies were implemented, including a presentation to the department highlighting opportunities to give feedback and introduction of electronic log books to record case presentations with relevant feedback.

Methodology:
Between January - May 2018, questionnaires were distributed to University of Manchester 4th year medical students at the end of each 4-week musculoskeletal health block at Wythenshawe Hospital. Results, including analysis of free-text comments for themes, were compared to those from the project completed in 2016.

Results:
38 student responses were received over the 5-month survey period. Compared to results from 2016 (before the introduction of logbooks), a 24% reduction was seen in the number of students reporting difficulty identifying staff to provide feedback (Fig. 1 - unable to upload table to abstract proforma). A 6% increase in the number of episodes of feedback obtained during their placement was demonstrated and there was an improvement in quality of feedback for both orthopaedic and rheumatology cases, with 73% and 60% respective improvement in number of students receiving both positive feedback and areas for improvement. In our current evaluation, students reported feedback gained from orthopaedic and rheumatology sessions would change future practice in history taking and examination (68% Vs 71% respectively).

Furthermore, 74% of students reported that the placement increased their confidence in clinical history taking and examination and 61% of students reported that receiving feedback gave them confidence to ask for feedback in future. Within free-text comments, common themes for barriers to effective feedback included time constraints and difficulty identifying staff to provide feedback.

Discussion:
This evaluation demonstrates improvements in practice since introduction of electronic log books and highlighting specific opportunities for feedback within the student timetable. Students found identifying both patient cases and staff from which to obtain feedback less difficult, more episodes of feedback were obtained and student perception of quality of feedback was seen to improve. We plan to introduce a number of changes including using the student induction presentation to emphasise the importance of seeking opportunities to clerk patients and timetabling inpatient sessions from which students can identify such patients. The findings from this evaluation have been presented to relevant clinicians, with advice to clearly signpost when feedback is being delivered, use SMART objectives and spend at least 5 minutes on each session. We will re-evaluate the impact of these changes on student perceptions in the subsequent university cohort.

References:

Presentation Details: Friday 5th July, 10.20-10.40am, Carron 1
Do A-levels prepare students to succeed in assessments at Medical School?
C Jones
University of Glasgow/York Hospital

Background:
UK Medical Schools require high levels of academic attainment at entry to Medical School. Attainment UK school leavers is usually demonstrated through A-levels. Despite the excellence of their results, a significant proportion of medical students experience academic difficulty during their first year (1). This raises the question of whether or not A-levels are preparing students to succeed in the assessments set during 1st year.

Methodology:
This paper explores the students' perspectives of their experience at A-level and how this relates to their transition into, and academic performance during, the 1st year of Medicine. Fourteen students took part in semi-structured interviews based on vignettes of successful/unsuccessful students. Vignettes allow interviewees to discuss an issue using their personal and observed experiences. Interview transcripts were subjected to a template analysis to identify themes (2,3) which are considered within a theoretical framework grounded in Bourdieu’s Theory of Practice, where the final year of secondary and 1st year of tertiary education were considered to be separate, but interrelated fields (4).

Results:
Learning in secondary education was predominantly driven by external motivators, directed by teachers and assessment focused. These factors supported passive learners. A-level syllabi were well defined, signposted by teachers, had clear learning outcomes and their content was contained in discrete learning resources. Students were taught until they had learnt the content. Assessment preparation focused on past papers, which represented a resource which demonstrated performance, identified knowledge gaps and represented questions from the actual exam. Secondary teachers were invested in ensuring students’ success, because the teachers and institutions were dependent on ‘good’ grades as proof of their own success. Cramming was a tested method of succeeding. Different resources were available to students, depending on their personal capital and type of school. Some students never had to ‘try hard’ to succeed, whereas others always worked hard and developed a ‘good work ethic’. University education was characterised by learning in multiple formats and sites and with a range of tutors. The curriculum had broad learning outcomes with content spread across many different sources. This required students to be highly organised and to integrate their learning. Students were responsible for ensuring that they had learnt material and they had to develop new mechanisms to self-monitor their understanding. Teaching was delivered in different and unfamiliar formats, particularly lectures. Ultimately students were responsible for their own independent learning. There were no past papers. Formative papers sampled, rather than comprehensively covered, the curriculum. Cramming was not a successful strategy for approaching assessments, because of the volume of work and complexity of integration required. The nature and format of university assessments was significantly different from A-level, both in term of a written and clinical assessments. University teachers were responsible for setting assessments and were not invested in a culture of normative scoring and did not benefit personally from the success of their students. Students with abundant resources in secondary education or who had ‘never had to try’ might struggle in the learning and assessment culture encountered at Medical School. In fact, their previous ‘easy success’ might create an inappropriate complacency in their approach to university assessments.

Discussion:
Students’ perceptions of their experience of learning for and preparing for A-levels were different and often contradictory to their experience of learning and preparing for assessments at Medical School. Factors that facilitated the A-level success of some students were stripped away at university. This might leave previously successful students vulnerable to unexpected failure.

References:
Exploring the undergraduate dental students' views of collaborative learning in the clinical learning environment
A Dargue, E Fowler
University Hospitals Bristol NHS Foundation Trust

Background:
Undergraduate dental students in the UK often work together in pairs when treating patients as part of their clinical training. Collaborative learning is described as working together with shared effort and responsibility for a task.1 Very few studies have explored the students' views of paired collaborative learning for clinical skills in the clinical setting, and only one study was found that was relevant to Dentistry.2 This study had limited depth due to its design. Across the UK there are increased student numbers and finite resources available for dental clinical teaching.3,4 Local course evaluations over several years had given conflicting results on students' views of collaborative clinical working. Thus, this study aimed to explore the dental students' perspectives of collaborative clinical working and identify whether any improvements could be made to the clinical learning environment. Ethical approval was obtained.

Methodology:
I used a constructivist, interpretivist inductive methodology with a phenomenological basis to understand the students’ experiences and views of working in pairs.5 I chose stratified purposeful sampling to illustrate characteristics across the different years.6 Eight students from three clinical years recorded three audio-diaries using Gibbs reflective cycle as a guide, reflecting on their experiences of collaborative learning with peers.7 This was followed by individual semi-structured interviews. The diary-interview method was chosen to provide greater depth and clarity, and allowed investigation of individual beliefs.8,9 Inductive thematic analysis was performed on the data.

Results:
Students had a mostly positive view of working in collaborative partnerships. Three main themes were identified around the focus of effective collaborative partnerships. These themes related to individual characteristics, relationships and learning.

Discussion:
The students identified that effective collaborative learning partnerships used active, experiential and observational learning. Positive aspects of collaborating with a student partner were feeling supported in their relationships, so creating a safe learning environment where they were comfortable asking questions. They also valued the emotional support that working with other students gave, and this helped them cope with pressure. They highlighted the development of friendships in healthy partnerships that made them feel they belonged. This increased trust and familiarity allowed for more effective feedback. Working with a variety of partners was seen as positive and contributed to learning non-technical skills. A technique of ‘benchmarking’, comparing their knowledge and skills with those of a peer, was described by students when paired and was used in a constructive manner. Negatives of collaborative learning related to interpersonal difficulties and led to students feeling unsupported in the clinical environment. This created a barrier to learning. Students also highlighted feeling frustrated in the assistant role and this increased as they become more experienced. Correspondingly they noted that observational learning provided lesser quality learning than experiential. Conclusion The study demonstrated the significance of social interaction and collaboration with peers to be a vital part of the clinical learning experience. Peers are seen to have an important effect on each other’s learning in positive and negative ways. Suggested improvements arising from this study are the use of ground rules for effective student partnerships and to promote a safe clinical learning environment. Students need to understand the value of the assistant role which staff can further encourage and support.

References:


Presentation Details: Wednesday 3rd July, 3.30-3.50pm, Carron 2
How do medical students decide on their elective? - A mixed methods study
C Mashford
University of Warwick Medical School

Background:
The Elective, part of the UK medical curriculum for nearly 50 years, is a chance for students to experience healthcare outside of the normal bounds of medical school and is recognised for its wide-ranging benefits (1). Students have choice in what they do and where they go, with approximately 80% using the opportunity to experience healthcare outside the UK (2). However, there is limited evidence on how medical students make their decisions. Existing literature focuses on post-experience insights, host perspectives and non-medical study abroad programs, with scarce research exploring pre-experience decision making by healthcare students(3). By understanding why students make the decisions they do, practices can be refined, preparation individualised and learning maximised to enable the elective to provide the kind of transformative learning we should be striving for. This study aimed to explore, quantify and rationalise the factors driving elective decision making.

Methodology:
A mixed methods approach with a convergent parallel design was used (4), with qualitative data collected through 8 semi-structured one-to-one interviews and quantitative data through a self-completed 20-item questionnaire. In Autumn 2017, final year medical students at Warwick Medical School, due to undertake their elective in Spring 2018, were invited to participate in the study. Interview transcripts were thematically analysed using an inductive approach and coded using a 6-phase method (5-6). Questionnaire data was statistically analysed using the Pearson Chi-squared test. The results from the equally weighted strands of the study were kept separate through data collection and analysis, before they were integrated through narrative for interpretation.

Results:
In the interviews 13 themes were identified, the most prominent positive themes being skill and knowledge development, and widening personal and professional horizons, often through an understanding of health in a global context. Finances, health and safety concerns, and the timing of the elective relative to final exams were significant difficulties. Factors such as educational quality, organisational ease and destination specific factors had lesser influence. These themes were grouped under the categories of push, pull and limiting factors, with push representative of the driving forces behind a decision, pull making one choice more attractive than another, and limiting acting as a barrier to a choice. The questionnaire was completed by 88 students, most choosing an overseas elective (78.4%) with 52.4% traveling to a low- or middle-income country. Students intending to travel differed from their peers remaining in the UK on a number of points, notably regarding the importance of experiencing different healthcare systems (86.9% vs 51.8%; p=0.01) and exposure to new or advanced conditions (80.3% vs 29.6%; p=0.01). Students remaining in the UK attributed less weight to the availability of leisure activities (37.0% vs 79.3%; p=0.01) and climate (11.1% vs 67.3%; p=0.01), but were greatly concerned by finances (86.9% vs 51.8%; p=0.01). 79.5% intended to use personal savings to fund their elective, with travelling students more likely to seek family assistance compared to their peers (37.7% vs 15.8%; p=0.05), who had greater reliance on credit lines and bursaries.

Discussion:
A three-step theoretical model for the decision-making process was developed in which students first narrow their choices using push factors, then limiting and finally pull factors. Significant differences between those travelling and those remaining were identified, yet lack of travel must not be confused as lack of interest, as for may it is the result of other limiting factors. Students, regardless of destination expressed similar motivations - push factors. By understanding the driving forces behind the decision and, importantly, the barriers faced, tailored support can be provided throughout the elective cycle in order to maximise gains for all.

References:

Presentation Details: Wednesday 3rd July, 3.50-4.10pm, Carron 2
How to optimize Medical school ‘teacher training’: A focus group study of UK Junior doctors.
S Winfield, J Garner
Aintree University Hospital NHS Foundation Trust

Background:
Medical students utilize workplace learning to supplement didactic teaching and UK clinicians must teach to progress through professional training. Unfortunately, “formal education on how to teach is generally lacking throughout medical school” [1]. This study aims to present junior doctors’ views on how to best prepare medical students for postgraduate teaching responsibilities.

Methodology:
Primary data were collected from 2 homogenous focus groups of 6-8 junior doctors at a UK Hospital. Informed consent was obtained prior to participation and purposive sampling captured the maximal breadth of variation in undergraduate ‘teacher training’. Focus groups are “particularly useful for exploring people’s knowledge and experiences” [2] and allow multiple perspectives to be voiced within their professional culture [3]. The focus groups were audio-recorded, transcribed and thematically analysed and data were anonymised to ensure confidentiality. REC reference 19/HRA/0526

Results:
Focus group participants felt training to teach should occur, as undergraduate students should be aware of their postgraduate teaching responsibilities. Starting preparatory teaching early allows skills to be developed throughout medical school and affords students multiple opportunities to practice and improve. Educational theory, teaching styles and pragmatic advice about planning lessons, engaging students and creating learning objectives were considered relevant content to include in curricula and delivery in the form of a dedicated teaching workshop was favoured. Key notions which dominated each focus group discussion were that of being observed teaching others and given explicit feedback and the existing expectation to engage in peer teaching. Experiences of being taught how to teach varied at different Medical schools, with such teaching preparation only being offered to certain groups of students (i.e academically gifted students, those with enthusiasm for teaching or those intercalating in Medical Education).

Discussion:
Participants felt ill-prepared to teach. Importance was placed on being observed (and given feedback) by a teaching ‘expert’ and debate sparked over the concept of formally assessing students’ teaching through specialised teaching ‘OSCE’s’ or an educator portfolio to evidence engagement with teaching. Take Home messages: Timing of teacher training is imperative - start early! Delivery and content should be relevant and engaging. Consider assessment of teaching skills to motivate students and signify their importance and expert feedback is invaluable.

References:

Presentation Details: Wednesday 3rd July, 4.10-4.30pm, Carron 2
If you didn't write it, it didn't happen - can documentation skills be taught in simulation?
A Pereira, G Dixon, J Ross, G Zubikarai, AE Stanton
Great Western Hospital

Background:
Written documentation is a vital form of communication between healthcare professionals, however teaching and preparation in this area is minimal (1). Documentation is particularly difficult when it involves assessment of an acutely unwell patient, a scenario frequently encountered by foundation doctors out-of-hours and without direct supervision of a senior. Performing this task inadequately can lead to adverse outcomes for patients and medico-legal implications for doctors (2). We aimed to investigate the current abilities of final year medical students to document an acute clinical scenario. Following this we evaluated whether a single brief teaching encounter could improve pre-defined objective measures of documentation.

Methodology:
Final year medical students at Great Western Hospital participated in simulation teaching. Immediately after completion of a designated acute medical scenario, the students involved were asked to document their review in the role of the junior doctor on call. To enhance fidelity they were given a time limit and provided with supplementary material such as test results. The teaching sessions were split into two groups, one group was given brief teaching at the start of the session, including a suggested structure, main points to include and review of example documentation. The other group was asked to complete the task with no additional guidance. Both groups had a formal debrief, including verbal feedback and discussion on documentation produced. Guidance was distributed to all students at the end of the course. Students completed surveys to assess previous experience, confidence in documenting in acute scenarios, and usefulness of the task in preparation for FY1. Documentation produced was marked using pre-determined criteria - created based on independent published guidance from the GMC (3), MDU (4) and RCP (5). Independent markers were blinded regarding student group and scored each aspect on a 0-1 or 0-1-2 basis. Score results were analysed using unpaired t-tests in SPSS.

Results:
30 students participated in the pre-simulation survey and 24 completed the post-simulation survey. Survey results indicated that 79.2% of students had documented in medical notes before - of these, 89.5% had documented on a ward round, 78.9% as a patient clerking and only 42.1% as an on-call/acute review. None of the students had had any formal teaching on documenting in medical notes. 96.7% had never documented a patient encounter in simulation teaching. The mean documentation score of students who did not receive intervention (n=7) was 18.7/31, this improved significantly to 23.4/31 in students who received the teaching (n=12). Mean difference of 4.7 (95% CI 2.57-6.82, p0.05). The pre-task mean confidence for all students was 1.97/5 (5= extremely confident), this improved to 2.5/5 in the group with practice alone and 4/5 in the group with brief teaching and practice. The mean score from all students for how useful the documenting task was in preparation for FY1 was 4.83/5 (5=extremely useful). Commonly missed areas in the marking were discussion with patient/relative, name of the senior doctor who gave advice and signature.

Discussion:
Our survey confirms a lack of documentation teaching as indicated in previous literature and that student experience is particularly lacking in acute review situations. Simulation practice was well-received, and the statistically significant improvement in the objective scoring indicated the efficacy of the simple teaching intervention. Simulation training regularly involves practice of other communication e.g. SBAR handovers and written prescribing (6). Our novel study confirms it is also a good opportunity to address written documentation skills. Given the potential repercussions of errors, we suggest documentation should be included in all final year simulation in preparation for practice. We hope to evaluate the longer term influence on learning and practice of this intervention

References:
5. Royal College of Physicians (2007). Generic Medical Record Keeping Standards. Available at: https://www.rcplondon.ac.uk/projects/outputs/generic-medical-record-keeping-standards

Presentation Details: Wednesday 3rd July, 5.30-5.50pm, Carron 2
Implementing a Unique Immersive Near-Peer Led Clinical Skills Bootcamp for Early-Year Medical Students
U Khan
Nobles Hospital, Isle of Man

Background:
Clinical skills training is a critical component of medical education, in particular for third year medical students who have not been exposed to clinical teaching previously. It is widely described that formal teaching on clinical skills is lacking in the standard medical school curricula. Near-peer teaching is a novel concept, whereby the teachers are more senior than their learners, but are still peers (1). Junior doctors represent an untapped workforce to help develop clinical skills of medical students (2). We present the establishment of a unique immersive clinical skills bootcamp for third year medical students, with formal teaching under five key themes: procedural skills day, examinations, imaging, data interpretation and prescribing. Lastly a simulation event was developed to allow the participants to bring the different themes together, in order to successfully manage an acutely unwell patient using the newly learnt skills.

Methodology:
A two-month preparation period was required to liaise with the local medical education department and medical students to ensure the 4 week bootcamp was tailored to the student participants. A clinical skills curriculum was developed. A 17-item pre- and post-course questionnaire was distributed to assess participant’s knowledge and the tutors teaching performance using a five-point Likert scale. Post-session feedback was categorised into two domains: teaching content and delivery by presenter. Feedback was both qualitative and quantitative. A combination of objective structured clinical examination (OSCE), lectures and group discussions were utilised to enhance the students learning. A focus group was held post-bootcamp to allow for a two-way constructive feedback system to occur between tutors and students.

Results:
Bootcamp was delivered to 15 students who showed an interest. Feedback was overwhelmingly positive with a 100% success rate with students feeling more equipped for clinical medicine. All students feel more equipped to take opportunities that arise on medical wards as a result of the skills learnt. 93% of students agree a combination of OSCE, lectures and group discussions approach was useful in their learning. Most students (87%) agree the length of the course was appropriate. Average overall tutor teaching score throughout the bootcamp ranged from 9.5-10. All students would recommend this bootcamp to their peers. Verbal feedback from the focus group was overall positive with most students citing the opportunity to practice skills repeatedly in a supervised environment.

Discussion:
Early-year clinical students successfully received an immersive, goal-directed course with formal teaching delivered by junior doctors. The near-peer teaching model improved course evaluation by students. We were able to successfully demonstrate that near-peer teaching is effective when it is goal directed, and further when it addresses areas of medical education whereby there is disparity in the formal teaching available. Early year medical students feel more equipped following the use of a triad of teaching techniques covering core aspects of clinical skills, required in order to effectively utilize time on the wards in subsequent placements. Finally, mutual benefit is gained for both the tutor and the student to refresh knowledge using a near-peer approach and to hone teaching methods. The bootcamp will be delivered again following further interest from students. Further data will be generated to allow for comparison between different subject cohorts, and students will be followed longitudinally at the end of their first year of clinical medicine to determine long-term impact of the course.

References:
Is a 'Students as Partners' approach effective in the Medical Undergraduate Setting?
M Kronfli, G Murtagh
Imperial College London

Background:
Undergraduate medical education is typically undertaken by teaching and academic staff, according to necessary curriculum requirements. Feedback mechanisms allow dialogue between teacher and learner, but do not always adequately reflect students’ experience. This study reports on a simple re-framing of this process, considering students’ involvement in teaching and learning as ‘participation as social practice’ (1). The project used a Students as Partners (2) approach, which moves beyond engaging the student voice, involving students as co-collaborators (3), with relationships founded on reciprocity, community and responsibility (1). We wanted to test this in the context of medical undergraduate communication skills teaching, supporting 5th year students to lead projects, utilising their experiences and perceived learning needs to directly inform teaching session design.

Methodology:
18 students were recruited through advertisement in a student bulletin. At an initial workshop, students reflected on their experiences of clinical practice to identify learning needs. In groups they formulated learning outcomes and designed simulated patient role-play teaching sessions, supported by tutors and actors. Students delivered their session to a group of peers and presented their projects and evaluation findings at a final showcase event to peers and senior medical school faculty. Ethical approval was obtained from the University Ethics Committee. All students were recruited to the evaluation study using convenience sampling. Evaluation questions addressed: 1 Acceptability and value to student educators; 2 Change in students’ confidence in teaching, and self-rated teaching skills; 3 Potential impact at institutional level; 4 Meaning made by students of ‘Partnerships in Learning’. Pre- and post- questionnaires (Likert and free-text) addressed Qu 1 and 2. Questionnaire data were analysed using descriptive statistics, Wilcoxon signed rank test, and thematic analysis. Field notes addressed Qu 3. Qu 4 was explored using focus groups at the start and end of the project. These were audio-recorded and transcribed, and analysed using Thematic Content Analysis.

Results:
All students designed and delivered sessions. 94% attended the final showcase event. 100% of participants found participation of value to “my professional development as an educator” and to “my professional development in communication in medicine”. Students most valued autonomy to conceptualise and create their own session, and teaching skills learned. Pre- and Post- analysis revealed a statistically significant increase in participants’ scores in response to the questions “How good do you think your teaching skills are?” and “How confident would you say you are about designing and delivering a teaching session?” (p 0.01). At the initial workshop, students identified areas of perceived learning need, for example ‘Communicating procedures and tests’, ‘Difficult conversations with patients’ and ‘Practicing as a student’. At the showcase event senior faculty and student educators discussed perceived areas of learning need. Focus group findings revealed students’ understanding of “Partnerships in Learning” aligned closely with existing definitions in the literature.

Discussion:
Partnership (as we conceived it) had a positive impact on students, who valued a sense of autonomy in their role as educators. The “Students as Partners” approach aligned with medical students’ teaching and learning values, and demonstrated potential impact at institutional level. During students’ presentations, a shift was observed towards “being educators” implying a journey from learner towards the centre of an education Community of Practice (1). As a possible secondary outcome, enabling students to bridge a gap between learners and faculty could help address barriers to creating student-centred educational interventions, warranting further research. Next steps include evaluation of institutional impact and of the outcomes for peer learners.

References:

Presentation Details: Wednesday 3rd July, 4.50-5.10pm, Carron 2
Learning about Translation and Cultural Competencies in simulated GP consultations for undergraduate medical students

A Sufraz, P Tayler-Hunt, R Hearn
King’s College London University

Background:
Effective communication is vital for patient safety and standards of care, and is important to overcome language and cultural differences. A 2005 study of 19 inner London general practices showed that, of 232 video-recorded consultations, 20% were with patients of restricted English language ability and included “major and often extended misunderstandings” (1). Whilst there is a wealth of research focused on translation in a medical setting, there are few studies focused on the teaching of the issues presented by language differences and the use of translation in a primary care environment. The primary aim of this research was to investigate the suitability of the simulated GP environment as a setting to teach students about language differences and the use of translation resources. Another fundamental aim was to explore students’ perspectives and thoughts on the simulated GP consultations and their learning experiences from these encounters.

Methodology:
This was a mixed methods qualitative study. The first phase was observation of 3rd year medical students from King’s College London (KCL), participating in a simulated GP surgery. A scenario was designed in which a female patient presenting with abdominal pain was accompanied by her husband, who was acting as a translator. Additional layers of complexity around family dynamics and cultural phenomena exacerbated these communication challenges. Ethics approval was granted by KCL. Observations were recorded as field notes by the observer with direct quotations when appropriate. Two focus groups (each with 3 participants) were conducted for both students and GP tutors facilitating the simulated surgeries, and audio recordings for the groups were transcribed verbatim and anonymised. The second phase was a questionnaire sent out to participants after the learning encounter. Emergent thematic analysis of the audio recordings was conducted by two researchers independently.

Results:
A common set of themes was identified for each focus group. The significant themes identified for both students and GP tutors, were ‘safe learning environment’, ‘learning experience’, ‘reliability of translated content’ and ‘realities of family translation’. From the questionnaire results (response rate: 25%), all respondents (n=9) agreed that the simulated GP consultation setting was appropriate and a safe environment to discuss issues surrounding language differences and the use of translation resources. Furthermore, all study participants believed the simulated surgery experience complemented the teaching they had previously received on language differences and the use of translation resources and would recommend the teaching for future cohorts of students.

Discussion:
Medical students highly valued the simulated GP environment as a place to learn about language differences and the use of translation resources. An essential advantage of simulation is that it provides a safe space for learning and practice for undergraduate medical students and is a powerful learning tool as it replicates real-life scenarios and enables live feedback in a group setting. In this particular scenario, students used a family member of the simulated patient as a translator during their consultations, and this enabled effective exploration of the myriad of issues this may present, particularly in terms of the sensitivities of conducting intimate examinations and concerns around the integrity of the translation. There is on-going work looking into formally integrating areas highlighted as learning needs for students earlier in the curriculum. This will allow students to practise and learn iteratively during the simulated GP surgeries.

References:

Presentation Details: Wednesday 3rd July, 5.10-5.30pm, Carron 2
Learning how to prepare students for integrated care: Lessons from Leicester Medical School (LMS)
E Hayward, L Anderson
University of Leicester

Background:
The 5 year forward view states that “the traditional divide between primary care, community services, and hospitals... is increasingly a barrier to the personalised and coordinated health services patients need.” (1) Proposed changes focus on changing workforce roles and the alignment of health with social care for interprofessional collaborative practice. (2) A recent report by Health Education England for the West Midlands identified that there was little evidence of training for the future generation of professionals for these new ways of working (3) despite recommendations that newly qualified doctors “must work collaboratively with patients and colleagues to diagnose and manage clinical presentations safely in community, primary and secondary care settings and in patients’ homes.” (4) Leicester Medical School (LMS) has established 7 week ‘Integrated Care’ course allowing fourth year medical students to work with community health and social care teams delivering care to patients with complex needs. This presentation will share lessons learnt during the introduction of this innovative course.

Methodology:
An interprofessional group of medical educators developed the course aims and objectives with input from patients and students. Two community trusts provided placements in community hospitals, integrated/continuing care teams and third sector organisations. After an introductory week, students worked with interprofessional community teams to develop their ability to assess and manage patients with complex needs and to learn how primary, secondary, community, social and voluntary sector organisations collaborate to provide care.

Results:
Using mixed-methods evaluation both quantitative and qualitative student and staff data will be shared. The Integrated Care course at LMS, developed with the aim of equipping medical students for new ways of working, elicited a range of responses from students leading to delivery challenges. Unexpected outcomes will be discussed and the changes made in response to the cyclical evaluation data shared.

Discussion:
Initial feedback from this course suggests that many students receive and understand benefits of learning about integrated care from a range of healthcare professionals, in placements that have not previously hosted medical undergraduates. A number of barriers to successful delivery of this teaching exist:

- Practical e.g. travel time, distance and cost. Engagement of community healthcare professionals unused to teaching medical students.
- Concept of medicine as either primary or secondary care. Further evaluation is needed to build the evidence base for “what works” in training for integrated care, to enable positive aspects of this course to be adopted elsewhere and lessons learned to be shared.

References:

Presentation Details: Thursday 4th July, 2.00-2.20pm, Carron 2
Medical Students' awareness of and choices of sources of help for mental health problems at one UK medical school
T Quince, H Caisley, P Thiemann, P Wilkinson, S Jackman
Primary Care Unit University of Cambridge

Background:
Undergraduate psychological distress and particularly that experienced by medical students, has become the focus of recent research and press comments. However, relatively little research exists into medical students' help seeking behaviour and factors influencing this. Based on an earlier qualitative investigation we sought to examine medical students' awareness and choice of sources of help and reasons for their selection, together with their personal experiences of mental health issues and support for these.

Methodology:
468 clinical students (Years 4 -6) at one UK medical school were invited to participate in an online questionnaire survey. In addition to demographic information (age, gender, year) open questions asked students to list sources of help they would or would not recommend to a friend experiencing psychological distress, their reasons for those recommendations and their own experiences of mental health problems.

Results:
174 students participated; (response rate 37%) of these 56% were female, 1% transgender. Their average age was 23.4 (range 21-35).
In total students made 790 suggestions; the majority made 4 or 5 suggestions. We group the sources of help generically into the following:
1] Student specific: comprising:
a] Formal: provided by faculty, college and university wide services e.g. University Counselling Service
b] Informal: provide by university based organisations and groups usually comprising student volunteers.
All “student specific” 614 suggestions (78%) a] Formal (531, 67% ) b] Informal (83, 10%)
2] External generic: comprising services available to anyone with mental health problems, e.g. GPs, Charities etc. 119 (15%)
3] Familial/informal: friends and family 57 (7%)
The GP was the most frequently mentioned individual source mentioned by 110 students (63%).
157 students gave reasons for each source selected, in total 491 reasons, some students gave several reasons for each source.

We grouped reasons into:
About the student (which included personal experience, observed experience of another and having an existing relationship with this source/person) 72 (15%)
About the source: (which included good personal qualities, appropriate professional skills, personally able to do something, able to direct to appropriate help, being familiar with medical students’ circumstances, having a formal role to help.) 347 (71%)
Fear of potential implications: (which included confidentiality, impact on course or career, linked to the clinical school.) 33 (7%)
Access: ease of 24 (5%)

For 15 students the reason their recommendation depended on the circumstances of their friend, and his/her problem. Almost 50% of the reasons given for recommending sources related to three aspects a] being professionally qualified or trained, b] able to personally do something and c] knowledge of and able to direct to other appropriate sources. Having an existing personal relationship with the source (9%) was mentioned more frequently than all of the issues related to fear of implications.

Only 79 students (45%) suggested sources they would not recommend, in total 118 suggestions and of these 92 (78%) related to formal “student specific” sources. Main reasons given for not recommending a source were lacking appropriate personal qualities and skills, not being able to do something and difficulties of access.
51 students (29%) reported receiving help for mental health problems. (Their experiences have yet to be analysed in detail.)
Discussion:
Fear of stigma was not found to be a significant factor in students’ choices of mental health support. Formal "student specific" sources were most frequently recommended (and not recommended). GPs were mentioned by a majority of students. This study suggests that students may want to see that sources of help have appropriate skills, are able to direct to further appropriate sources and are able to effect changes. These results may assist medical schools in implementing student mental health support.

References:
2. Olivia Rudgard. "Universities have a suicide problem as students taking their own lives overtakes general population.". Daily Telegraph 12 April 2018

Presentation Details: Thursday 4th July, 2.20-2.40pm, Carron 2
Medical Students perceptions of General Practice
K Banner, H Alberti, J Cleland, J Stewart
Newcastle University

Background:
Recruitment into General practice is falling and many training programmes in the UK have unfilled training posts (Health Education England, 2016). In 2016 NHS England pledged to increase the number of graduates entering GP training to 50% (NHS England, 2016). However in 2017 only 15.3% of foundation year 2 doctors commenced GP (UK foundation Programme, 2017). This work aims to understand medical students’ perceptions of a career in GP, and how this may affect their career intentions.

Methodology:
This study is split into two main sections as part of a larger, longitudinal study at four UK universities. For the preliminary part of the study, first and fourth year students at Newcastle University were invited to a focus group to discuss their perceptions of a Career in GP. This data was then analysed to identify students perceptions, and establish if students could identify experiences which contributed to these perceptions. For the secondary, longitudinal part of the study. Students were asked to produce an audio diary over the course of six month. Reflecting on experiences relating to General Practice soon after the event, identifying what happened, and how it made them think about General Practice as a career. As part of the longitudinal study Students also participated in a semi-structured interview prior to, and following the diary stage, during which they identified their initial perceptions, and reflected upon how these may have changed over the six month period.

Results:
The perceptions discussed in the Focus Groups and Interviews could be broadly grouped into three categories. “The GP” highlighted students’ ideas of the GP as someone who was dedicated, could create rapport and wanted a family life. The “Job of the GP” indicated students were positive about the continuity of care the job offered, but felt the work was isolating and paperwork heavy. Finally, external factors such as denigration and the “GP land” concept also had an impact on students’ perceptions. First year students identified the media as a source of their perceptions regarding General Practice, as well as their own experiences with their General Practitioner. They identified Hospital open days and work experience as a draw towards Hospital Medicine rather than General Practice. Students who were in fourth year identified their clinical placements and teachers as having the greatest impact on their perception of a career in General Practice. The longitudinal diary data is currently being collected.

Discussion:
The work so far identifies a number of perceptions (many negative) which are held by students, and identifies experiences through which these perceptions may develop. Further work is needed to understand how these perceptions develop, how this may impact students career intentions, and how this research could be used to improve GP recruitment. The audio diary section of this research aims to further understand the impact experiences have on students, and their personal narratives on the development of their perceptions.

References:

Presentation Details: Thursday 4th July, 3.00-3.20pm, Carron 2
Meeting of Minds: Exploring Medical Literature and Critical Analysis through a Student-Led Undergraduate Journal Club
B TK Hui, RS Pooni, K Waite
University Hospitals Birmingham

Background:
In clinical practice, the journal club is a commonly used method to understand and utilise evidence based practice and critical analysis. Journal club demonstrates a forum which can make medical literature more accessible, while promoting critical thinking, positive reading skills and fostering professional colleague relationships (1). A group at Newcastle medical school have previously demonstrated positive undergraduate learner feedback when implementing a journal club as a teaching method for critical appraisal (2). A student-centred journal club may also offer a safe environment where learners can develop these skills with less fear of embarrassment, as might be the case in a postgraduate setting, where often junior team members present to expert senior doctors. Aside from the aforementioned study from Newcastle, there is, unfortunately, a lack of literature regarding the use of journal clubs at the medical undergraduate level. We therefore aimed to implement an undergraduate journal club for students to learn and apply critical analysis of medical literature.

Methodology:
The journal club was created as part of the final year rotation at the Queen Elizabeth Hospital Birmingham. Being focused on the undergraduate learner the group was named the ‘Student Led Undergraduate (SLUG) Journal Club’. The initial session was delivered by a clinical teaching fellow, firstly informing students on the purpose of journal club. It then discussed PICO (3) as a tool for answering a clinical question. Selected critical analysis frameworks included the GATE frame (4) and RAMMbo (5) were introduced. An example journal club presentation was then delivered to allow students to observe how the frameworks could be applied when critically analysing medical literature. The development of this session and selection of critical analysis frameworks were chosen based on guidance from a hospital library journal club/critical analysis workshop (4). Each week, one/ two students would lead the meeting, each identifying a paper of interest and preparing a presentation critically analysing the paper. The construction of the presentation was guided by input from an allocated teaching fellow. The teaching fellow would facilitate the journal club session, where the lead students would present to the rest of the journal club cohort and then engage in discussion around the presented topic. Following the session, the presenter would receive feedback and critique on their presentation and audience interaction from the teaching fellow.

Results:
A pre-session survey demonstrated a lack of familiarity with journal clubs within the student group as well as a lack of confidence surrounding the use of PICO and critical analysis frameworks when approaching the medical literature. A post-session survey demonstrated a more confident understanding in the above domains. Surveying presenters found the opportunity to prepare, present and engage in discussion useful towards their clinical and professional development, as well as feeling more confident in presenting at a journal club as a qualified doctor. The teaching fellow critique of presentations demonstrated high quality literature identification and critical analysis using the relevant frameworks.

Discussion:
The SLUG Journal Club has demonstrated a positive environment offering a final year cohort a safe space to explore evidence based practice and critical analysis, in turn contributing towards their clinical and professional development. A high level of presentation demonstrates successful application of critical analysis tools as introduced in the initial session. A limitation of this study is that the journal club is not currently implemented as a core component of the final year curriculum. Integrating it as part of the curriculum would allow for formal evaluation of learning by the medical school. This would be the next stage in the journal club development which would then allow for assessment of behavioural change in practice (6).

References:
Out of hours, out of sight? Uncovering the education potential of general practice urgent care for UK undergraduates

E Grove, V Boon, T Thompson
University of Bristol

Background:
It is known that undergraduate medical education influences future career choice (1) and both the quantity (2) and quality (3) of the undergraduate community placements affects students’ entry into general practice. The Department of Health in England suggested that 50% of UK undergraduates are needed in GP training posts (4). In keeping with a desire to enhance GP recruitment and increase student exposure to primary care within the undergraduate curriculum, there appeared to be a need to look at teaching opportunities within a undergraduate primary care placement. The 2004 change in general practice (GP) contracts allowed GP’s to handover out of hours (OOH) provision to independent providers and this meant medical students were no longer naturally exposed to GP OOH work, could the OOH environment provide a novel educational opportunity? This study aimed to establish the education potential of the primary care OOH learning environment.

Methodology:
This was a mixed-methods study with two strands; a questionnaire exploring the current exposure that UK undergraduates have to GP OOH nationally and focus groups with final year students at Bristol medical school who had completed a voluntary OOH placement during their primary care attachment.

Results:
The questionnaire received a 100% response from the 36 current heads of teaching in primary care at UK medical schools. Despite 86% (31) being in favour of integrating OOH placements within the undergraduate curriculum, only 28% (10) of medical schools are offering primary care OOH placements. These placements are almost entirely voluntary, involving a small number of sessions and they are for final year medical students. It was felt that OOH exposure provided a different working environment and patient population compared to routine in-hours care, but there were concerns regarding the logistics of implementing these placements. Further qualitative data would be presented. 36 out of 240 Bristol students signed up to a clinical OOH session. Focus group data from 6 students revealed key themes of value added including different from an in-hours placement, educational opportunities and allowed an appreciation of structure of the National Health service (NHS). However, barriers included logistical difficulties with the OOH providers and inadequate supervision.

Discussion:
It appears that we are overlooking a unique educational opportunity for medical undergraduates. With increasing demands for GP exposure within the undergraduate curriculum, GP OOH is a useful resource for UK medical schools. Reluctance towards GP OOH is predominantly related to the organisation of these placements, if this can be overcome, along with training for supervisors and clear student objectives then a successful programme can be established. Irrespective of establishing a formal OOH placement, there appears to be a need to increase undergraduate education on the primary-secondary care interface and NHS structure. Six top-tips for integrating a primary care OOH placement within an undergraduate curriculum will be presented.

References:
Patient Shadowing and its role in empathy development
W Calvert
University of Liverpool

Background:
Within medicine, clinical empathy represents an active demonstration of understanding of another’s feelings, allowing clearer communication and improved carer relationships. (1, 2) It has been evidenced that empathy benefits healthcare - Patients of empathic clinicians report more about their symptoms and concerns (3, 4) and show increased treatment compliance and satisfaction and improved outcomes. (5, 6, 7) Clinician satisfaction improves, serving as a buffer against professional stress, burnout, substance abuse, and suicide. (8) It is therefore concerning that declining levels of empathy have been reported in studies of some medical students (9, 10, 11). While no consensus for this reported decline exists, possible cited suggestions include increased focus on biomedical knowledge and disease centred patient interactions exposure to unethical and unprofessional behaviour (12, 13). To address the misconceptions and misunderstandings demonstrated by the study of clinical empathy this study proposes that we need to understand how empathy is perceived by medical students over the course of their undergraduate course and how students react to an intervention designed to increase empathy

Methodology:
A mixed-method study was devised to investigate the potential for observation of a real patient experience to impact on the development of empathy, as part of a wider PhD investigating empathy in medical students. All 3rd year medical students (n=267) from the University of Liverpool, UK, were randomised to either clinician or patient shadowing within paediatric daycase surgery. The Jefferson Scale of Empathy (Medical Student Version) (JSE-S) was used pre and post the shadowing experience. Post event voluntary focus groups were conducted using phenomenological methodology. The format included 2 explorative questions and then an iterative review of themes from previous groups to explore thinking in the current group. Group discussions were recorded, transcribed and analysed using both data coding and content analysis.

Results:
267 students were randomised, one student withdrew. 209 (78%) returned their post event JSE-S. Pre and post event JSE-S score analysis did not demonstrate any significant difference in those undertaking either shadowing methodology. 71 students attended 7 focus groups. Data coding revealed that in all groups there was student interest in understanding the nature and development of empathy but also lack of understanding of patient experience. Content analysis identified the benefit of patient shadowing over clinician shadowing as an educational tool for both experience and empathy development and showed that students are aware of the importance of understanding the patient experience. There is demonstrable medical student confusion surrounding empathy even at a basic concept level. The negative effect of poor role model exposure was also demonstrated.

Discussion:
Patient shadowing is a valuable medical education tool. Clinician shadowing can lack educational value, especially at a social sciences level. Medical educators need to understand the medical students want to know about the development and benefits of clinical empathy but there is still some confusion amongst students over its application reinforcing the confusion that surrounds it within clinical practice. Just as a duty of candour exists towards patients so does a duty of candour exist towards students. We need to be able to talk openly and confidently about the importance of clinical empathy in a forum where it is appropriately understood and practiced. There is conflict between the qualitative and quantitative analyses suggesting that longitudinal studies using self-assessment tools may not be valid. From the focus groups it is proposed that there is a need to develop the educational picture of clinical empathy as a fluid multi-modal model.

References:
9. Lim B T, Moriarty H, Huthwaite M, Gray L, Pullon S, Gallagher P. How well do medical students rate and communicate clinical empathy?. Medical
teacher, 2013; 35(2), e946-e951.
education, 2004; 38(9), 934-941.
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Education. 2014; 14, p. 165.

Presentation Details: Friday 5th July, 9.40-10.00am, Carron 2
Putting the World in World Cafe: Adapting the world cafe model to allow thorough de-brief following a medical elective.

D Maxfield, J Fisher, R Walker
Northumbria Healthcare NHS Foundation Trust

Background:
Previous studies have shown that students welcome opportunities to de-brief following their elective and led locally to the development of workshops, where final year MBBS students present a synopsis of their elective to third year students [1]. We contend that there is value in providing final year students with further opportunity for more structured and supported reflection on issues that arose during their electives. The world café is a well-recognised model that is designed to stimulate discussion, enhance learning and encourage reflection [2][3]. The aim of this project is to explore how an adapted version of the world café can be implemented as a tool to enable students to reflect on experiences from their elective. The aspiration is that this will enhance their professional development and promote a deeper understanding of global health issues, as well as enabling us to refine future teaching of global health in the MBBS curriculum. We aimed to answer the following research questions: 1. To what extent does an adapted world café model facilitate development of students’ understanding of their personal development following their medical elective? 2. To what extent does the opportunity to compare and contrast varying medical elective experiences amongst peers promote deeper understanding of health diversity and global health?

Methodology:
Ethical approval was gained for the project from Newcastle University. The session was run with fifth year MBBS students, as a one off “elective afternoon”, followed by voluntary focus groups, with written consent obtained from those involved with focus groups. 32 students and 8 facilitators attended the elective afternoon where discussion was stimulated by prompt cards in a relaxed café environment with refreshments available. Prompt cards were developed to address the intended learning outcomes, focussing on areas of perceived personal development, difficulties faced and global health issues encountered. Students were arranged in groups with differing elective experiences and/or locations to promote diversity within discussion. A facilitator was present on each table to ensure that discussion remained focussed but not to steer conversation. At the end of the session students were asked to write down one thing they had learnt about their personal development and one about global health - this data was collected by the research team. Students were then invited to voluntarily participate in focus groups. Six students attended the first focus group where a semi-structured topic guide posed questions aiming to generate data that addressed our research questions. Focus group data was audio-recorded, transcribed and anonymised. Thematic analysis will now be employed with input from a second researcher to promote rigour in the analysis process.

Results:
We aim to present the results of our analysis and subsequent discussion at the ASME annual scientific meeting.

Discussion:
As above.

References:

Presentation Details: Friday 5th July, 10.00-10.20am, Carron 2
Required to withdraw: experiences of struggling first year medical students
A Picton, S Greenfield, J Parry
University of Birmingham

Background:
10-15% of UK medical students struggle at some point in their studies. (1) Struggling incorporates academic failure, course disruption and early course exit. (2) Reasons for this are not always clear cut and usually a mixture of academic, personal, social and health factors. (3, 4) New or pre-existing mental health problems such as anxiety, depression and eating disorders are frequently present. (5) These may be exacerbated by the competitive environment and high workload of medical school. (2) Struggling students may fail to engage with supportive mechanisms, often due to concerns about confidentiality and perceived long-term effects on their career. (6) First year students are particularly susceptible to stressors related to adaption and new methods of learning. (7) There are substantial financial and emotional costs involved with failure or course withdrawal, including psychological distress and stigma. (5) As recommended in previous research, we carried out exit interviews to provide further insight and student perspectives of those required to leave early in the course. (4)

Methodology:
The study took place in the University of Birmingham Medical School, UK. Full approval was obtained from the University Ethical Review Committee (reference ERN_17_1246). Study dates are not specified to protect student confidentiality. During one academic year, we contacted all students who had opted to leave or were required to withdraw from their first year. Students were asked to participate in an individual interview to explore their experience of the year. Interviews were unstructured and led by a general open question. Interview transcripts were read and summarised. A coding framework was agreed by the research team via an iterative process. All interviews were coded using NVivo software. Framework analysis identified key data themes for each participant. (8)

Results:
Fourteen students responded and were interviewed (n=11 females). Interviews were face to face (n=10), telephone (n=3) and email (n=1). We identified that the first year of medical school is a critical transition. It features three key adaptations with their own challenges, as individuals simultaneously learn how to be a university student, a medical student and a doctor. Within this common chronology a six group typology of students emerged, each of whom struggled with one or more of these adaptations. The groups were: wrong degree choice, mental health problems, acute crisis, ‘at capacity’, ‘slow starter’ and ‘family rock’. Groups were not distinct and many students overlapped-for example mental health problems were a contributing factor for half of the students (n=7).

Discussion:
This study’s key finding is the identification of a typology of students at risk of struggling in their first year. Mental health problems are recognised to be prevalent in struggling medical students and this finding is confirmed in our results. Students who decide that medicine is not the right degree choice for them are also an established group within early course exits. Many students reported an acute crisis which derailed their studies such as a bereavement, physical illness or relationship breakdown. Other students defined as ‘at capacity’ or ‘slow starters’ struggled with university transition or work-life balance. Among our study participants there was an indication that students admitted via a widening participation route or living locally may be more likely to experience significant family responsibilities at home as a ‘family rock’, which could be detrimental to their studies. Listening to the narratives of students who have struggled from an early stage can guide University staff to support future students. (9) Awareness of the possible reasons for academic difficulties may help with early identification and provision of targeted academic and pastoral support.

References:


Presentation Details: Friday 5th July, 10.20-10.40am, Carron 2
Role models for female undergraduate medical students: what attributes do female students look for and what is the influence of gender?
N Dutta, M Page
Imperial College

Background:
Role models have the ability to inspire, instil behaviours and guide careers choices. Within medicine, females continue to face gender-specific challenges and are under-represented in senior positions. This leads to a lack of visible female role models for student learners. There is little research on role models from the female student perspective; this study addresses this need, specifically exploring preferred role model attributes, the influence of gender on role model choice and visibility of female role models.

Methodology:
Medical students from a London medical school were interviewed to ascertain their perceptions on role models and the influence of gender on this, using a semi-structured interview format. Interviews were recorded and transcribed and thematic analysis of the data was performed, using an inductive approach.

Results:
Ten female undergraduate students were interviewed. All students felt that role models played an important part in their learning. Positive role model attributes included interest in student learning, clinical skills and enthusiasm for the profession. Most students felt that gender was important in role model choice; cited reasons for this included being able to identify themselves in the role model and the demonstration of a positive example of work and family life balance. There was limited visibility of female role models at senior levels, particularly in surgical specialties. The lack of role models in these specialties deterred students from choosing these careers. Female students described that they faced gender-discrimination and gender-stereotyped comments in the clinical setting.

Discussion:
The female student learning experience is affected by ongoing gender-based discrimination in the undergraduate clinical setting. Female role models provide unique benefits to female student learning, yet there remains limited visibility. Educators must look towards strategies to improve the female student learning experience, these should include increased efforts to identify and manage gender discrimination and action to increase visibility of female role models.

References:

Presentation Details: Friday 5th July, 10.20-10.40am, Dochart 1
Simulation bingo: An effective method of engaging observers in-situ?
R Pooni, K Waite, B Hui, K Johns
University Hospitals Birmingham NHS Foundation Trust

Background:
Since the turn of the 21st century simulation-based education has become a well-established part of undergraduate medical school curricula. It provides a platform for fortifying and augmenting medical knowledge in a supportive, non-judgmental environment, as well as a stage to highlight errors in healthcare and the importance of non-technical skills (1). Primary focus in simulation concentrates on high-fidelity scenarios that both engage learners and are relevant to the workplace. However, this focus is centred almost entirely on active participants. One aspect simulation struggles to address is the inclusion of observers. Due to the resource intensive nature of simulation and the growing undergraduate cohort, the number of observers far outweighs those who are actively participating (2). Therefore, it is of increasing importance that we optimise observer learning in-situ. Whilst educational research continues to examine debriefing methods (‘The Diamond’ model of debrief, shared mental models, etc.) (3,4), effective strategies for engaging observers in-situ remain in their infancy. Indeed, for many years “while attention to broad roles in simulation was found in the literature, no specific study of the observer role existed” (5).

Methodology:
Through a fourth-year medical student simulation, we aimed to engage observers using an innovative approach; ‘Human factors bingo’. Having introduced human factors for the first time to fourth-year students prior to the simulation, our intention was for observers to consolidate their new-found knowledge in-situ. Simulation provides the ideal learning arena for human factors to manifest themselves, be scrutinised and finally reflected upon in a time sensitive manner. With a previous study successfully addressing human factors in a standalone session, we adapted their language to meet our local human factors framework (6). As the simulation unfolded, observers were encouraged to scrutinise their peers’ behaviour providing positive examples of human factors (leadership, problem identification, systems accessibility, etc.) listed on their ‘bingo cards’. This format followed the traditional game of bingo, whereby students competed to complete their card first.

Results:
Student feedback was largely positive, concentrating on the interactivity element of bingo and the ability to tailor subsequent peer-to-peer feedback on non-technical skills they had written down during the simulation. With evidence that note taking improves retention (7), a ‘pen-in-hand’ technique facilitated learning in this instance. However, the most beneficial feedback from students was that it allowed them “to look for something specific during observation.” Previous feedback from similar simulations told us that observers were unsure as to what they should be analysing throughout the simulation and therefore disengaged easily. By ensuring the observer activity was tailored to the scenario, there was less learner disengagement. Furthermore, this led to a more fruitful debrief discussion.

Discussion:
A drawback from this observer strategy is that it was perceived by a proportion of students to be an activity of necessity, rather than a valuable timeframe in which learning could be optimised. With evidence for learning by observation less transparent than experiential learning, it is important we collaborate with our students to determine which activities work best for them. The true value in engaging observers in-situ lies in empowering students to engage post-simulation. With observers involved from the onset, they are more likely to bring their ideas to the fore, stimulate learning and ultimately drive the direction of debrief. Whilst debrief demonstrated that learning took place through human factors bingo, it is only one example of observer activity. With this in mind, it is imperative we implement novel techniques that are specific to different simulation scenarios and positively engage observers, so they too feel as valued as active participants.

References:

Presentation Details: Thursday 4th July, 2.00-2.20pm, Dochart 1
Stimulation with Simulation: Creation of a "Virtual Ward" to Improve Medical Student Learning

P White, A Moxley, L Baxter
South Tyneside District Hospital

Background:
The Newcastle Medical School curriculum includes a module (Patients, Doctors and Society 6: Preparation for Practice (P4P) (1)) which intends to teach medical students non-technical skills, such as communication and reflective practice, that historically have seen poor engagement and poor enjoyment from cohorts. As evidence shows greater benefits are observed when a simulation environment aligns with clinical practice (2), the purpose of this study was to assess if creating a virtual ward of patients could aid teaching within the three week course and ultimately improve student engagement and enjoyment.

Methodology:
The individual sessions for the module were kept the same as previous years. The difference was the creation of a virtual ward. Final year medical students were assigned the role of ward F1s, whilst the teaching fellows became the SHOs and Registrar. Each morning there was a handover where the ward list was reviewed and jobs were prioritised. Students were informed of a new development for one of their ward patients which framed the learning for the day. For example, on the palliative care day a patient approached the end of their life and on the medical error day a patient was fed through a misplaced NG tube. Every evening 2 students were allocated to be ‘on call’. During this session they were given a variety of on call tasks to prioritise and complete including an emergency presentation scenario using sim man. They would then update the ward list and handover the developments to their colleagues the following day. Throughout the 3 weeks, there were also ward rounds, prescribing tasks and referrals to make for the ward patients. Communication sessions gave the students exposure to breaking bad news and de-escalating conflict, with a ‘relative’ of one of their patients. Every session, scenario or task was mapped to a University learning outcome for the module or one of the General Medical Council’s Outcomes for Graduates.

Results:
Feedback has been gathered via the University of Newcastle Medical School online portal that invites all students to anonymously submit feedback regarding their teaching experience. 100% of feedback from the students regarding teaching has been positive (8.33% agreed, 91.67% strongly agreed). Some direct quotes from student feedback include: ”The ‘fake ward’, on call shifts, daily handover and clinical reasoning sessions drastically improved my knowledge of what will be expected of me next year.” “Using a simulated ward with patient scenarios also gave the seminars context and I believe I have retained more information because I could relate the teaching to case examples.” “… speaking to my peers it appears that some of the elements that contributed to its success could be used beneficially across more of the P4P sites.” In addition to the feedback already gathered, we intend to perform structured interviews after their ward assistantship to ascertain if they feel the virtual ward environment better prepared them for clinical practice.

Discussion:
It is clear from the feedback that the students have given that the overall experience of the virtual ward has been resoundingly positive. What has been insightful is that when students reflected on their teaching compared to their peers they felt that they received a more coherent, relevant three week module, despite the learning outcomes being identical. Further, students have reflected not just on their ability to put their understanding into practice, but also on the importance of the skills learnt in their clinical practice. It is difficult to ascertain which aspect of the virtual ward specifically caused this outcome, whether it was having the day structure with a handover and on-call, the various virtual patients or a combination of them all. Even though the session topics were the same as the previous year and other hospital sites, when reframed in the context of the virtual ward students perceived a much higher level of learning and clinical relevance.

References:
1. Newcastle Medical School (2018) Patients, Doctors and Society 6: Preparation for Practice

Presentation Details: Thursday 4th July, 2.20-2.40pm, Dochart 1
Student perspectives on barriers to performance for Black & Minority Ethnic graduate-entry medical students
N Morrison, C Blackburn, M Machado
University of Warwick

Background:
UK medical students from Black & Minority Ethnic (BME) backgrounds have been reported to underperform academically compared with their white counterparts. (2, 4, 5) This persistent difference in performance between ethnic groups is known as the differential attainment gap and poses a huge problem for the medical profession. Even though, the differential attainment gap has been widely documented, the causes are unclear. (1, 2) Current literature findings suggest that ethnic stereotypes may contribute to BME medical students’ underperformance, yet overt discrimination has not been evidenced. (3) Furthermore, a systematic review and analysis of UK medical students concluded that the ethnic differences in performance were not due to psychological or demographic factors, however, the study did not include graduate-entry BME students. (5) The study outlined in this paper aimed to build upon previous research by exploring the views and experiences of BME students at a West Midlands Medical School regarding the cultural, psychological or other factors perceived to be linked to performance.

Methodology:
This was a small qualitative study of 24 MBChB students at a West Midlands Medical School. Participants were volunteer and snowball sampled. To be eligible to participate, students needed to be enrolled onto the MBChB course for at least 12 months and self-identify as being from a black or minority ethnic (BME) background. This included but was not limited to those of African, Asian, Arab or Caribbean descent. Based on their availability, participants were assigned one of four focus groups and data were gathered using a semi-structured interview schedule. The interview schedule contained open-ended questions and was prepared by the researcher beforehand, in order to give each group a consistent structure. Focus groups ranged from 60 minutes to 3 hours (average 111 minutes). Each group was recorded and transcribed. Thematic analysis was applied to the data. The study was approved by a university ethics committee.

Results:
BME students reported facing numerous barriers that impeded their learning and performance. The relationships with staff and clinicians, though also identified as facilitators to learning, often hindered progress, as many students felt that a lack of representation and lack of understanding of cultural differences impacted their experience. Students also reported a lack of trust in the institution, with many not seeking support. Students reported having to mask their identity to fit in amongst their peers as well as to avoid negative stereotyping. Although rare, BME students faced overt racism from other students and patients. Several students described experiencing daily microaggressions and witnessing microaggressions against others. Many BME students reported feelings of isolation, reduced self-confidence and low self-esteem that hindered their learning and performance.

Discussion:
BME students in this study faced a range of difficulties throughout their graduate-entry medical training that they felt impeded their learning and performance. Although it is not clear from this small study of one institution whether these findings would be replicated in other institutions, they nevertheless highlight important issues to be considered by the institution concerned and other institutions. These findings suggest that future interventions should consider improving peer relationships and student-staff relationships and implementing institutional changes to diversify student and staff populations. Guidance on tackling racism as well as adequate training in anti-racism, culture and diversity for both students and staff is likely to be key.

References:
Supporting transition to the clinical learning environment for medical students from underrepresented backgrounds
S Curtis, R D’Silva, C Gilbert
University of Southampton

Background:
With the increasing use of contextual admissions at medical schools it is crucial that widening participation (WP) students receive appropriate support enabling a positive student experience, maximising integration and success. Medical students from underrepresented backgrounds can lack a sense of belonging and identity, which impacts on self-confidence.1 It is also reported that students find transition points within the curriculum challenging.2 To address these concerns we designed a series of workshops supporting WP students’ transition from a mainly academic environment to a predominantly clinical environment. These workshops were co-facilitated by relatable role models, WP graduates. The titles of the five workshops are: inclusivity and cultural identity; communication and having difficult conversations; managing difficult personal circumstances and coping with stress; preparation for working in the clinical environment and building confidence and professional identity. The aims of this study are to determine the effectiveness of the workshops in increasing a sense of belonging and professional identity along with self-confidence.

Methodology:
A three stage impact evaluation framework was designed to evaluate the workshops. The first stage employed pre and post workshop questionnaires. These questionnaires included Schwarzer’s General Self-Efficacy Scale3, which assessed general factors that closely align to the individual workshops and Shochet’s John Hopkins Learning Environment Scale4, which assessed medicine specific perceptions of personal growth and the learning environment through seven sub-domains. The questionnaires also included open questions and free text comments. The second stage engaged focus groups, held after the workshops, to evaluate the process and immediate impact. For the third stage and longer term analysis, undergraduate and postgraduate assessment data and time taken to graduate will be analysed.

Results:
A total of 38 students attended some or all workshops. The response rate for questionnaire completion was 97%. All workshops were very well received with a mean Likert score for each workshop between 4.32 and 4.75 (1 = not at all useful, 5 = very useful) all had a median score of 5. With one exception, average self-efficacy and learning environment scores increased following the workshops, the sub-domain of community of peers showing a significant increase for those who attended three or more sessions. From open questions, the least useful aspects identified included role play and timing restrictions. The most useful aspects included the opportunity to interact with others, especially graduates; having a safe, non-judgmental environment for open discussion; developing self-belief; feeling a sense of community and validation of feelings and thoughts. Students stated that in the future the workshops would enable them work and act with greater confidence and insight, whilst understanding the perspectives of others more. The also stated they felt they would be able to deal with stress and deal with conflict more effectively. It is anticipated that analysis of the focus groups will further explore these themes.

Discussion:
With the additional obstacles that many WP students face at medical school it is vital that appropriate support is provided at appropriate points in their studies to optimise their progression, retention and success as well as their student experience. The results show the workshops were very well received and that they are effective in increasing a sense of community among peers. Students valued a safe arena to discuss their experiences and greatly appreciated the opportunity to talk with WP graduates. In the short-term it appears the aims to increase a sense of belonging and professional identity along with self-confidence have been met but further analysis and data collection is necessary to determine their long term effectiveness in progression, retention and success.

References:
Sustainability Matters: how can we engage our medical students in thinking about sustainability issues?
A Skidmore, S Aynsley, S Briggs
Keele University

Background:
Although often linked to recycling and energy use, sustainability impacts more diverse and wide ranging areas of healthcare. The United Nations Sustainable Development Goals (SDGs) (1) combined with increased commitment to sustainability knowledge in the GMC’s Outcomes for Graduates (2) emphasise the importance of embedding sustainability into healthcare education. Student support for embedding sustainability into teaching and learning is also demonstrated in the NUS Sustainability Skills Survey (3). As part of a project led by the Centre for Sustainable Healthcare (4) and aligning with Keele University’s Education for Sustainability (EfS) strategy (5), an audit of the sustainability teaching within the Keele MBChB curriculum was completed. This revealed instances of existing teaching on sustainability as well as new opportunities to further embed this into the curriculum, especially in clinical years.

Methodology:
An opportunity to embed sustainability was identified in Year 3 MBChB. Third year students are immersed in a clinical environment 4 days a week and many observe sustainability issues in the NHS first hand. We introduced a plenary lecture followed by small group workshops for the whole cohort. In the first iteration of the project, we used a 1hr workshop with ~44 students in each session split into 4 groups. Each group had a scenario highlighting a sustainability issue in healthcare (food waste, transport, surgical waste, drug waste) and researched the issue and possible solutions before presenting their findings. The session was evaluated with a questionnaire comprising rating scales and free text questions. In response to student feedback we further developed the session into an integrated workshop drawing on contemporary issues in sustainability in the local context, linked to the SDGs and sustainability theory. Maintaining the workshop style, 4 key sustainability issues in healthcare were used (food waste, air pollution, mental health & rehabilitation, and social deprivation and access to healthcare). Each small group explored an issue to identify and evaluate proposed solutions which were then presented to the class. Students were surveyed using rating scales and free text questions.

Results:
Feedback from the first iteration revealed the majority of respondents enjoyed the style of delivery and comments were largely positive around the group work aspect. Three quarters of respondents agreed sustainability is relevant to their future career, whilst over half agreed this may change their future practice. Interestingly, just under half agreed sustainability should be embedded in the curriculum, while 25% thought it should be assessed. The second iteration is running in February 2019 with the intention to present the results at this conference.

Discussion:
As tutors, we observed good engagement from the students in the session and results from the initial cohort revealed improved student understanding of the relevance of sustainability in healthcare following the sessions. Whilst many were positive towards the introduction of the teaching others did not see the relevance. On reflection we identified the narrow range of issues selected - focusing largely on the obvious issue of waste - could be contributing to this. This was addressed in the revised version of the workshop and the results from that evaluation will be presented here. Overall, the interactive whole cohort workshop approach was successful, encouraging students to reflect on their experiences on the wards. This enhances the relevance of sustainability to students both in their current context and as future health professionals. We are now working to embed sustainability further in the curriculum. One recommendation from this work is to make teaching engaging, hands on and relevant to the students, whilst clearly demonstrating that sustainability encompasses more than recycling.

References:
The demise of death-by-PowerPoint: Interactive peer teaching and gamification for medical students
L Ting, A Demetri, R Webster, A Kerry, S Perry
University of Bristol

Background:
As medical education is moving away from traditional didactic teaching, methods involving active participation and student-led approaches, such as peer teaching, are on the rise. (1) Gamification (the use of games to facilitate learning) is also of increasing interest as it has been shown to improve motivation, engagement and enjoyment. (2) Peer teaching is often practiced at medical school as it leads to deeper understanding and retention of knowledge for the student who is the peer teacher, as they have to relearn the topic that they are teaching and re-organise their knowledge in a way that can be explained to others. (3) Unfortunately, students can lose focus during peer teaching as the peer teacher often presents didactically and does not interact with the peer learners. This study aims to improve engagement from the peer learners by encouraging peer teachers to use interactive components and games.

Methodology:
57 third and fourth year medical students on placement at the Great Western Hospital will be encouraged to use interactive methods and games during peer-led teaching sessions in groups of 8 to 9 students. Each student in the group will prepare a 10 minute session on any topic from their module’s curriculum. All sessions will be observed by a clinical teaching fellow (CTF) who will monitor the students’ engagements and clarify knowledge if needed. The CTFs’ observations will be collected through semi-structured interviews which will undergo thematic analysis. All students will be requested to complete a questionnaire at the end of each tutorial on their experiences as both a peer teacher and peer learner to gauge how the inclusion of interaction and games affected their learning.

Results:
As this study is still on-going, only pilot results are available. So far, 8 third year students have run their teaching sessions during a tutorial. 2 students included a game, 1 student designed worksheets and another student included a short collaborative task. 3 students included a short quiz at the end of their session. Only 1 student did not include any form of interactivity. From CTF observation, it was clear that the students engaged very well during the tasks and games. All 8 students rated this first session ‘excellent’ in terms of relevance, teaching style, structure and overall impression. Students reported that the process of preparing their teaching session useful and that it was an effective way to cover many topics.

Discussion:
Preliminary data is supportive of peer teachers using interaction and gamification to enhance peer learning. Students were able create effective tasks and games for their peers and demonstrated deep learning of the topics they taught. It should also be noted that peer teaching also had the added benefit of alleviating teaching pressures for faculty. So far, only one session has been completed. As the study continues, we will see if the initial success can be replicated in future sessions and will investigate reactions from peer teachers and peer learners.

References:
The Rise and Rise of Apps in Medical Education
I Stefanova, Y Negreskul, J Ryan, M Vega-Poblete, J Younis, F Gishen
University College London Medical School

Background:
Smartphone applications (‘apps’) are widely used by students in undergraduate medical education around the world to augment curricula (1,2). They enable quick and easy access to a wide breadth of medical information (3). The aim here was to explore the current usage of medical applications amongst final year medical students at University College London (UCL) and identify the potential need for a university-specific medical education app for this cohort.

Methodology:
A PubMed literature search was undertaken to inform medical education app use internationally by medical students. From this, a validated questionnaire was identified and used in this study (1). Final year medical students from UCL were then asked to take part in an online anonymous survey based on the questionnaire identified. Questions asked included whether participants used medical education apps for learning purposes, which aspects of their learning such apps were utilised for, as well as limitations to usage. The data was analysed using Chi-squared test for categorical variables.

Results:
70 medical students participated. Survey responders were evenly distributed by gender (p>0.05) and largely fell into 20-24 age group (p0.05). All the responders used at least one medical app, with 83% between 1 and 6. The two main areas of usage were firstly question banks, followed by prescribing aids (p0.001) with question banks being significantly more popular (p0.001). A number of issues limiting the use of currently available medical apps were identified, namely format and layout (43%; p0.001), the content not meeting the learning needs (26%; p0.01) and concerns about becoming deskilled by using apps (11%; p0.05). 89% of responders expressed a need for a UCL-specific medical education app (p0.001) with the most popular features being practice questions (89%; p0.001), administrative information and timetables (73%; p0.001) and clinical skills resources (69%; p0.001).

Discussion:
The results show that apps are widely used in medical education amongst final year students at UCL, mainly for accessing question banks and prescribing. Lack of perceived content appears to be the most common cause of dissatisfaction with currently available medical education apps. The majority of students expressed interest in a UCL-specific app, ideally containing a bank of UCL-style questions, suggesting that medical school bespoke medical education apps may serve as a valuable learning resource.

References:

Presentation Details: Wednesday 3rd July, 4.10-4.30pm, Dochart 1
The role of Balint groups in undergraduate medical education

N Gajree, Z Hutcheson, J Devlin, E Lewington, C Paton
NHS Lanarkshire

Background:
Empathy has been identified by the General Medical Council as a key professional skill that is required of doctors (1). It is essential for the formation of a strong doctor-patient relationship, which can enhance diagnostic accuracy, treatment adherence and clinical outcomes (2). Concerningly there is evidence that empathy declines in the clinical years of medical school (3). The ability to empathise is strongly related to the ability to understand one’s own emotions (4). Although emotions are increasingly recognised as playing a central role in the professional development of doctors, they are not given explicit attention in most undergraduate medical curricula (5). Teaching medical students about emotions in illness and the doctor-patient relationship can be a challenge to educators (6). Balint groups provide a structured process of clinical reflection though which a doctor’s experience of a relationship with a patient can be considered by peers in a supportive environment (7). Evidence indicates that Balint groups can improve medical students’ knowledge of the doctor-patient relationship and their empathetic ability (8). The aims of this study are to examine whether a Balint group helps medical students to gain a better understanding of the role of emotions in the doctor-patient relationship and whether students perceive the group as relevant to their educational needs.

Methodology:
A weekly hour long Balint group is being run for third and fourth year medical students from the University of Glasgow who undertake their 5 week medicine and surgery placements at University Hospital Hairmyres between November 2018 and May 2019. The group is facilitated by three medical leaders who all have experience of attending Balint groups and is supervised by a Consultant Psychotherapist who is an experienced Balint group leader. During the group, students are invited to present patient encounters that continue to occupy their minds. The leaders then facilitate a reflective group discussion focussing on the emotional aspect of the interaction for the student and patient. Following each 5-week group, students are asked to complete an anonymous questionnaire. They are asked to respond to statements about the Balint group on a Likert scale and provide responses to open-ended questions.

Results:
The students who have completed the Balint group thus far have all agreed that the Balint group has been an important space to think about the doctor-patient relationship, has helped them to explore their feelings and perceptions about patients and helped them to make sense about the feelings that doctors may have when seeing patients. They have commented that the group has enabled them to learn from each other’s experiences and allowed them to consider situations from different perspectives. Students have all agreed that Balint groups provide an aspect of training that is not currently addressed elsewhere in the medical school curriculum and agreed that participating in a Balint group is an important part of training as a doctor.

Discussion:
By providing a space for medical students to reflect on their own and patients’ emotions, Balint groups can enhance students’ understanding of the importance of emotions in the doctor-patient relationship. This may ultimately enable students to empathise better with patients. In addition, Balint groups are recognised by students as providing a crucial element of medical training that they do not receive elsewhere. They are valued by students for this reason. The results highlight the value of making Balint groups more widely available to medical students or, better yet, incorporating Balint groups into medical school curricula.

References:
The Wellness Scale: Evaluating the impact of an innovative tool to support medical student wellbeing on clinical placement.

A Gosal, C Oliver, M Young, L Bowen, C Priest, Z Brown, S Jenkin, K Benstead, P Davies, A Samuels
Gloucestershire Academy, University of Bristol

Background:
In an increasingly pressurised NHS, there are growing calls for medical schools to ensure that the doctors of the future are resilient practitioners (1). There are rising rates of mental health issues amongst all university students (2), and medical students are less likely to seek help than other students despite higher prevalence of mental health concerns (1). Greater support is needed for medical students experiencing mental health issues (3). Potential barriers to addressing medical students’ wellbeing include the lack of recognition that they need support and not knowing how to access help. A solution could be to use a wellbeing scale to help establish their level of stress, with signposting to avenues of support (5). Such scales have been used for students and doctors to ascertain their wellbeing (5, 6, 7) but studies to date have focused mainly on the resulting evidence of participants’ stress levels. No studies have as yet evaluated the impact of introducing a Wellness Scale for students on clinical placement away from the central university, as a tool to increase awareness of their wellbeing and available support. Our aim was to develop and evaluate a Wellness Scale for medical students in Gloucestershire.

Methodology:
We developed a Wellness Scale for medical students on clinical placement in Gloucestershire. This asks them to identify which of four discrete categories best describes their status, using relevant descriptors of: well; stressed; becoming unwell; or unwell. This Scale has been specifically written and adapted for medical students, based on a Canadian resilience tool (4). The document also includes signposting towards relevant support. Third year medical students on placement met with their tutor on a weekly basis for educational and pastoral support. In the 18-week study period, the tutors were asked to discuss the Scale twice with their students and identify support pathways as appropriate. At the end of the placement, a focus group discussion was held to explore the students’ views of the Wellness Scale. A white-space questionnaire has been sent to the tutors, regarding their experiences of using the Wellness Scale with their students.

Results:
Eight students were recruited to the focus group. The students’ feedback indicated they felt the Scale was “accessible”, encouraging them that it is “acceptable and normal to get help”. Every student said they felt it improved their confidence with identifying their level of mental health. Initial thematic analysis of the focus group discussion has shown emergent themes of accessibility, resilience and mentorship. Further stages of thematic analysis will be conducted, incorporating use of NVivo software. Tutor questionnaire responses are awaited and full results will be presented.

Discussion:
Innovative ways of identifying students’ level of wellness are an important step towards greater recognition of problems experienced, and appropriate signposting of the help available. Our students view the Wellness Scale as a useful tool that enhances their confidence in both ascertaining their level of wellness and finding appropriate avenues of support. The focus group discussion also brought to light a wider range of themes including mentorship, the stigma surrounding mental health, medical student support and resilience. The most striking outcome of this study is how the Wellness Scale has promoted open discussion of wellness as a whole. We believe that introducing our Wellness Scale has initiated a useful step in encouraging students to take ownership of their own mental health. Thus, we hope to continue developing the document and expand its use to include students across all years on placement within our Trust.

References:
3. Coombes R. Medical students need better mental health support from universities, says BMA. BMJ. 2018;361.

Presentation Details: Wednesday 3rd July, 4.50-5.10pm, Dochart 1
Transformative Learning and Identity in Medical Education: A Drag Perspective
G Sharpstone, H Bintley
Barts and The London SMD - Queen Mary, University of London

Background:
The Routledge International Encyclopaedia of Queer Culture asserts that “drag is a complex, diversified phenomenon that defies a single, all-encompassing definition.” (1) At the risk of vastly oversimplifying the concept; Barnett and Johnson, drawing on the work of Rupp and Taylor (2), suggest that drag performers have agency to “construct and present gender on their own terms” (3), drawing on the theatrical practices of assuming “a different persona, aesthetic and attitude” (3). As drag emerges into the mainstream cultural fore, as evidenced by a wealth of literature detailing its dramatic increase in media attention since the turn of the century (3-6), opportunity arises to examine its potential beyond the realms of entertainment. Already drag begins to find itself being used as a tool for education, such as by ‘Drag Queen Story Hour’, an initiative in which drag performers read to schoolchildren, addressing concepts such as diversity and gender expression (7). Drag by its very nature is transformative, which then begs the question of whether it could be used as a tool to facilitate transformative learning in medical education, particularly in the context of diversity and gender identity teaching, as well as in facilitating the process of professional identity formation. Mezirow’s theory of transformative learning proposes that learners’ meaning schemes (i.e. their frames of reference) can be adjusted, reformed and created anew through critical reflection on their content, how they were initially formed and their context (i.e. social, historical, etc.). (8, 9). Existing research has identified the potential for transformative learning in medical education, whilst acknowledging that more research is needed to inform the process.(10, 11). Critically, there is an emerging body of research which asserts that identity should be a central theme and target of transformative learning. (12, 13) A significant body of research already exists that argues the inadequacy of diversity and gender identity teaching in medical education (14-17), as well as literature which highlights the importance of increasing the focus on professional identity formation as a primary goal of medical education.(18-21) This study sought to explore the potential of drag as a novel educational tool to address these issues. Little research currently exists into the use of drag as an educational tool. With a view to exploring the potential of drag in this regard; as well as offering novel approaches to integrate transformative learning experiences and facilitate discussions about identity within medical education curricula; this study gathered data from medical students with experience as drag performers.

Methodology:
A qualitative research enquiry was undertaken, exploring the lived experiences of drag performers studying medicine, with a view to understanding whether drag might be able to facilitate transformative learning in relation to identity. Initiatives such as ‘Drag Queen Story Hour’ are evidence for the role of drag performers as storytellers; and De Fina and Georgakopoulou write that “narratives are seen as the prime vehicle for expressing identity and narrative analysts... argue that the stories we tell mold us into what we are.” (22) A narrative analysis was therefore thought to be an appropriate approach to the data in this study. The above taken into account, participants were invited to a semi-structured group interview, which explored their experiences of drag and of medical education, with emphasis on identity formation, before asking them to consider how these concepts might be integrated.

Results:
The results will examine the narratives of participants about their experiences of drag and medical education, as well as their perception of any parallels between the two.

Discussion:
The discussion of this study will consider how the results, in the context of existing literature, could be used to inform the integration of drag as a learning tool into medical education curricula.

References:

Presentation Details: Wednesday 3rd July, 5.10-5.30pm, Dochart 1
Truro Trauma Scribes: Using Students as Scribes to Increase Experience of Major Trauma
S Bryce, K Cheema, B Warrick
Royal Cornwall Hospital

Background:
Undergraduate students are expected to have an understanding of the assessment and management of major trauma, yet opportunities to experience this are limited. This is especially true for students rotating through trauma units as opposed to trauma centers, where trauma cases are less common. The 2016 National Institute on Clinical Excellence (NICE) guideline on Major Trauma emphasised the importance of assigning one member of the trauma team “to record all trauma team findings and interventions as they occur” [1], a role commonly known as the Trauma Scribe. Following this guideline, the Truro Trauma Scribes (TTS) project was launched in Royal Cornwall Hospital, with a primary aim of increasing medical and nursing student’s experience of major trauma. In addition, TTS has significantly increased the quality of trauma documentation, highlighting the ability of undergraduate students to contribute to better patient care.

Methodology:
Undergraduate students were recruited as scribes on a voluntary basis, and all were provided with a 30 minute training session on trauma documentation. Participants included 3rd to 5th Year University of Exeter medical students and University of Plymouth nursing students on their trauma rotation. Students signed up for shifts using an online app, and were advised to schedule shifts around their other educational commitments. At the start of each shift participants were provided with a phone which would alert them to incoming trauma calls, which they could attend and scribe for. Student experience was assessed using an online feedback form, which scribes were advised to complete after every trauma call attended. The project was endorsed by both universities who also provided pastoral support, and students were encouraged to reflect on the learning experience in the form of a reflective entry for their portfolio. Documentation quality was compared on trauma booklets completed by student scribes versus other members of the trauma team. This was done in three consecutive periods of analysis in 2016, 2017 and 2018. Retrospective data was collected from online records on the number of sections accurately completed, number of chronology entries, and completion of the ten core data fields as per TARN guidance.

Results:
33 feedback forms were received in total, however it should be noted the feedback forms were only introduced in the latter half of the study period. 88% felt that attending the trauma call was of benefit to their learning, and 75% felt that their presence was of benefit to patient care. Of those asked, 82% reported attending the trauma call had increased their interest in emergency medicine. Of note, there were no adverse events reported by the students. Whilst they were offered additional support for dealing with traumatic cases, none required this. A free text section of the form allowed students to provide further feedback, the majority of which was positive. A total of 38 documents completed by Students Scribes were compared to 61 from Non-Student Scribes. The Student Scribes were shown to complete more sections of the trauma booklet and include a greater number of chronology entries. As per TARN guidance, 100% completion of Core Data Fields is advised. The Student Scribes achieved 89% attainment over the 3 years, whilst the Non-Student Scribes only met 68% of the requirement.

Discussion:
Truro Student Scribes has been shown to be a valuable learning tool, with the majority of students describing the experience as beneficial. The project allowed both nursing and medical undergraduate students to develop their understanding of emergency medicine, with the majority reporting increased interest in the specialty. There is scope for the use of student scribes to be expanded to other specialties, such as cardiac arrest calls or medical emergencies, and a similar approach in other hospitals would allow further study of the potential educational and clinical benefits.

References:
Using simulation to improve confidence in approach to on calls in final year medical students
A Carroll, A Kiddle, E Booth, I Chung
Musgrove Park Hospital

Background:
On-call shifts can be an intimidating prospect for newly qualified doctors; they are often stressful and require the safe prioritisation of tasks and recognition of the need to escalate appropriately. It is also known that when under stress, there is a higher incidence of medical errors (1). We surveyed Final year Medical students across two academies and found that a high proportion had never held a bleep before and many had minimal experience in patient handover. The purpose of this simulation training was to improve patient safety by reducing the incidence of medical errors, while simultaneously improving the confidence of newly qualified doctors.

Methodology:
Our work was completed in the medical education departments of Weston General Hospital and Musgrove Park Hospital, Taunton. We involved current junior doctors alongside the clinical teaching fellows and focused on teaching the final year medical students from the University of Bristol during their apprenticeship placement (‘Preparing for Professional Practice’). Using simulation-based training, we created a simulated on-call scenario for final year medical students which included a variety of clinical tasks. These included practical prescribing, locating guidelines efficiently, assessment of patients, and communicating effectively with healthcare professionals. The medical students carried a bleep throughout the session whilst carrying on with a normal ward attachment in order to create a realistic experience. We gathered qualitative and quantitative data through the use of pre- and post-session questionnaires and analysed the data to suggest future improvements.

Results:
A pilot study was originally designed and implemented in 2018. Using the quality improvement project model, it included four ‘Plan-Do-Study-Act’ cycles which aimed to improve each session based on feedback from both the medical students and junior doctors involved. The medical students stated that they felt more confident in approaching on-calls and for many students; it was their first experience of holding a bleep and prioritising a list of jobs. Based on this feedback, we have included additional clinical tasks, for example, carrying out more practical assessments including a peri-arrest simulation. We have collected preliminary data through the use of pre-session questionnaires for the current final year medical students and are running the session in from January 2019 - March 2019 based on previous feedback. Final results will be available on the completion of the project.

Discussion:
Prioritising tasks and efficiency are skills that will take years to hone, however, by giving medical students a more realistic insight into on-call shifts through simulation, they will begin to recognise that it can be a particularly stressful time and identify aspects of improvement within their own practice. This project aims to create a safe environment for medical students to practise these key skills and as a result, new FY1 doctors will hopefully be more efficient in their practice and learn to prioritise jobs safely and effectively. Therefore, the impact of this change will to aim to improve patient safety and give new FY1 doctors confidence in their abilities. In the future, we aim to standardise the training that all final year medical students receive at the University of Bristol by implementing this project across the clinical academies.

References:

Presentation Details: Friday 5th July, 9.00-9.20am, Dochart 1
Virtual A&E experience using 360 video
J Ross, J Bath, J Ross, C Jacobs, J Bath
Swindon Undergraduate Academy, Great Western Hospitals NHS Foundation Trust

Background:
Clinicians learn from experience (experiential learning) and training in communication skills has traditionally involved the use of video recordings of patient and actor encounters. As technology has evolved rapidly over the last few years we are now able to produce accessible and immersive videos with the use of a phone and a headset. Additionally, health care students access learning material remotely outside of the typical classroom environment. There is limited literature regarding the immersive experience of 360-degree video and whether this learning tool can have future applications (1, 2). This is a clinical practice exercise which aims to explore whether medical students experience an altered learning environment by utilising 360-degree video technology.

Methodology:
Purposeful sampling of medical students with both pre-existing and novice perspectives on 360-degree video. A sample size of 10 medical students will be used. The participant will watch a brief 10 minute video of an accident and emergency consultation using a virtual reality headset. Following the video there will be an explorative questionnaire to collect qualitative data around their experience. Users of the headset will be briefed prior to use and it remains a safe method of watching video content. Thematic analysis of the participant experience will be completed.

Results:
Pending.

Discussion:
The qualitative data from the questionnaires will be analysed and themes developed to gain understanding of the nature and form of 360 degree camera experience and to infer explanations or generate ideas and concepts of learning with novel technology.

References:

Presentation Details: Friday 5th July, 9.20-9.40am, Dochart 1
Virtual Reality Fully Immersive Interactive Videos in Undergraduate Surgical Medical Education
A Kiddle, L Hainsworth, A Kosti, A Lloyd, R Bamford, I Hunter
University of Bristol

Background:
Virtual Reality Fully Immersive Interactive Technology Teaching (VR FITT) is an innovative teaching method to supplement the undergraduate curriculum. VR FITT employs the use of high definition 360 cameras to record simulated scenarios. These scenarios are then made interactive by adding a range of interactive options including hot spots and interactive questions. These are then uploaded to an online app which the students can access. The students then use their smartphone as a virtual reality headset. A key innovation of VR FITT is that it allows students a unique teaching method to experience scenarios they would struggle to experience in clinical practice. One such scenario is the ‘trauma call’ in which students need to develop an understanding of a range of skills. These include both technical skills, such as how to immobilise the C-spine and apply a pelvic binder, and non-technical skills such as teamwork and leadership. The development of these skills is an essential part of the undergraduate curriculum. We sought to compare medical student performance in managing a trauma patient between two groups: traditional teaching vs VR FITT.

Methodology:
Medical students were randomised into two groups of eight. The first group underwent the standard undergraduate teaching programme of tutorials and simulation. The second group underwent the same teaching and had access to VR FITT for 9 weeks, which they could use at their own discretion. We compared time to complete key aspects of the trauma scenario including but not limited to: C-spine immobilisation, IV access, IV fluids, application of a pelvic binder and transfer to CT.

Results:
VR FITT group scenarios were able to complete each task significantly quicker than the standard group. The standard teaching group struggled to complete key tasks including correctly apply a C-spine collar and perform a primary assessment. This is in comparison to the VR FITT group who were able to complete all tasks within the timed simulation.

Discussion:
VR FITT teaching significantly improves performance in managing trauma patients when compared with traditional teaching. VR FITT provides greater exposure to difficult and complex patient scenarios in a safe manner. This allows medical students superior development of their skills in comparison to those undergoing traditional teaching.

Presentation Details: Friday 5th July, 9.40-10.00am, Dochart 1
TEL Abstracts presented in oral Parallel Sessions
(by theme)
A national survey of undergraduate teaching in General Practice in the United Kingdom
E Cottrell, H Alberti, T Thompson, L Pope, J Rosenthal
Newcastle University

Background:
General practice is the largest branch of medicine in the UK and it is facing unprecedented pressure. The UK government, through General Practice Forward View, aims to significantly expand the GP workforce [1], yet current recruitment is not meeting existing demands [2]. It is recognised in the By Choice-Not By Chance report that medical schools play a significant role in influencing students’ decisions to enter a career in GP; the report makes several recommendations on how to promote GP as a specialty [3]. Yet, on an undergraduate level, the literature suggests the amount of GP teaching in medical schools is also insufficient to meet future workforce demands [4]. In this study, a national survey of all medical schools in the UK aims to:

- Quantify the exposure of undergraduate medical students in the UK to GP and to compare this to historical data
- Describe the financial and human resources allocated to support GP teaching
- Describe, and quantify, the initiatives in medical schools based on By Choice-Not by Chance recommendations

Methodology:
A survey has been designed by the authors with input from all the UK GP Heads of Teaching based on a questionnaire used in a previous study [4], new questions based upon the By Choice - Not By Chance report and other areas of interest as agreed by the Heads of Teaching group. An internal pilot of the questionnaire was undertaken with a number of participants to refine the questionnaire prior to distribution.

Results:
The finalised questionnaire was sent to each lead for general practice teaching at every UK medical school that had students in the academic year 2017-2018 in December 2018. Results are being analysed and compared to historical data. Although not yet available we believe the results will have significant ramifications for national discussions relating to recruitment into General Practice, and may provide suggestions for future changes to medical school curricula. Results of the survey will outline in detail the quantity and type of undergraduate teaching occurring in primary care across the UK; recent and planned changes to GP teaching in medical school curricula; the number and variety of practices involved in teaching; the number and payscale of GP and admin staff; GP trainee involvement in medical school teaching; recruitment issues in general practice; training development and career progression of GP teachers; academic GP input at medical schools; GP involvement in selection of medical students and career advice; payments of GP placements; challenges and innovations reported by GP heads of teaching.

Discussion:
Data from this study is intended to form the basis for further research. A follow on quantitative study investigating GP teaching in medical school curricula internationally is proposed in which a proportion of the data for this study will be compared to data internationally. A further qualitative study to further explore areas of challenge for community teaching is proposed; initial plans include interviews with primary care leads at UK medical schools to examine areas which are difficult to capture in a quantitative survey.

References:

Presentation Details: Friday 5th July 9.00-9.20am Alsh 1
ClinicalCasesPod: Do medical students tune in to a case-based podcast series to help them learn clinical reasoning?
R Phillips, E Davies, K Marchon, M Okorie, T Vincent, J Montgomery
Brighton and Sussex University Hospitals Trust

Background:
Clinical reasoning is what “clinicians use to generate, test and verify diagnoses, assess the benefits and risks of tests and treatments, and judge the prognostic significance of the outcomes of these cognitive achievements”(1). Given the importance of these skills in clinical practice, there is increasingly a move towards finding new ways to expose clinical reasoning to undergraduate learners (2) (3). Despite this, newly qualified UK doctors feel unprepared for clinical reasoning in practice (4). Podcasts are becoming a widely accepted method of supporting learning and are increasingly used in medical education (5). However, their role in facilitating the learning of clinical reasoning specifically is yet to be clearly established.

This project aimed to address this by:
1. Analysing medical students’ understanding of clinical reasoning in their clinical years
2. Understanding their use of podcasts generally and for medical studies
3. Assessing whether the experience of listening to case-based podcasts created and recorded by foundation doctors highlighting clinical decision making is useful for learning and well received
4. Exploring whether the use of podcasts might support the transition from final year medical student to foundation doctor.

Methodology:
The authors produced three podcasts based on the discussion of a clinical case between a foundation doctor and a more senior doctor. The emphasis of the podcasts was on why clinical decisions were made. The podcasts were based on real-life clinical scenarios, were written by foundation doctors and approved by consultant physicians. Each podcast comprised three sequential “episodes”, each episode lasting approximately five minutes, and were broadcasted via a free hosting site (AnchorFM). Medical students in years 3-5 were given access to the podcasts and invited to participate in the study by completing an online questionnaire. After a month, another email was sent to the students asking those who listened to attend a semi-structured interview. Thematic analysis of the qualitative questionnaire results and semi-structured interview transcripts is being undertaken. Participants will be contacted before completing their undergraduate course or during the early months of their foundation year 1 training to further explore the usefulness of the podcasts.

Results:
Synthesized results of the questionnaire and semi-structured interviews will be completed by early March. Preliminary results indicate variation in the use of podcasts generally, but a full uptake of the ClinicalCasesPod series, even among those who report not subscribing to podcasts normally. Data so far suggest that the students find the format helpful for increasing understanding of clinical reasoning in diagnosis and management, with greatest value being during clinical placement and in preparation for foundation training. There is a strong call for more clinical scenarios and insight into which presenting complaints are felt to be most needed. There are also helpful suggestions from users of how the format can be improved. The focus groups will provide more in-depth understanding of how students felt about the podcasts as a learning aid and will enable the researchers to elicit information regarding students’ understanding of clinical reasoning.

Discussion:
Preliminary data indicates this study will provide helpful insights into the behaviour of podcast use both generally and for formal learning specifically. The broad uptake and positive reporting of this podcast series suggests value in using this “bite-sized” conversational format to help open up the “black box” of clinical reasoning to learners. Furthermore, there are interesting insights into which points in the curriculum students feel this pedagogical approach has greatest value “from clinical placements during the course through exam revision phase to preparation for foundation training. This presentation will explore these nuances in order to enhance understanding of the feasibility and educational value of delivering podcasts for medical students to support their development of clinical reasoning. In light of calls for additional podcast series, this study helps medical educators consider the value of investing in this pedagogical approach and understand where it has greatest impact.

References:
(1) Kassirer JP. Teaching clinical reasoning: case-based and coached. Acad Med. 2010 Jul; Volume 85(7); 1118-1124


Presentation Details: Friday 5th July 9.20-9.40am Alsh 1
Evaluating the use of 360-videos in Medical Education by comparing it with 2D-videos: A Situational Awareness Case Study.
A Jain, V Dimitrova
University of Leeds

Background:
The emergence of new technologies has driven an increase in the number of gadgets being marketed in the educational sector. It is estimated that institutions spend Â£900m on education technology every year (Manning, 2017). Many emerging technologies are yet to be tested in an educational setting and further evidence of educational benefit is essential. One recent addition to the classroom was the 360-video, a specialised video that can be viewed in a full 360-degree field of vision in 3D, when using a Head Mounted Display (HMD). Initial research suggests that the 360-video format could be beneficial in the training of surgical skills, less is known about its use in developing transferable or soft-skills such as teamwork or situational awareness (Harrison, 2017). Moreover, there exists no defined methodology to evaluate the effectiveness of 360-videos for learning in medical education comparative to the traditional 2D Format on a computer screen. Aim: To develop and trial a methodology for evaluating 360-degree videos for informal learning of situational awareness by comparing it with the 2D-video format.

Methodology:
The literature regarding evaluating virtual reality devices as a learning tool was reviewed. Three broad evaluation areas were identified: Cognitive Effects, Usability and Affective Aspects. Evaluation instruments for each area were then selected based on their validity, reliability and applicability to the study. The instruments were combined into an evaluation methodology and applied into a series of user trials with 20 students from years 1 and 2 of the University of Leeds MBChB course in 2018. Non-parametric statistical testing was conducted to see if there were significant differences between the devices in the evaluation categories. The methodology was evaluated through a reflective journal and a series of post-experiment semi-structured interviews with the participants. Ethics: Ethical approval for this study was received from the University of Leeds Applied Health Research Project Committee on the 27th of February 2018.

Results:
Participants who used the 360-video scored significantly better (p0.022) in the cognitive test, and perceived it be of greater educational value than the 2D-video (p0.05). This gives support for the cognitive benefits of 360-videos. Participants also believed that using the HMD was far more engaging and immersive than using the computer. However, participants stated that the computer was significantly easier to use (p0.02), as well as significantly less mentally demanding, effortful and frustrating (p0.02). In-situ measuring devices (Heart Rate and Electrodermal Activity) corroborated the findings related to immersion and effort, with participants experiencing a significantly higher heart rate (p0.02) and stress level (p0.01) using the HMD. These results are consistent with Felnhofer’s (2015) and Egan’s (2011). There were no technical or logistical problems during the trials. However, some participants experienced difficulty choosing an option on the emotion survey and some found that the usability questionnaire and cognitive test were demanding. Alternative options for all three have been explored. The researcher found that observations were difficult to conduct and imprecise. Videoing participants using the devices should be considered.

Discussion:
Using this methodology, it was possible to detect significant differences between the formats in all the evaluation areas. Furthermore, the in-situ data collection tools provided valuable continuous data that gave insights into user-experiences and should be applied in the future. The experimental setup was well-received by the participants with none finding the study too time consuming or cumbersome. Therefore, it is recommended that this study is repeated with a larger cohort and with different medical education scenarios (e.g. building rapport, breaking bad news, mental health awareness), to inform implementation decisions in medical education.

References:

Presentation Details: Friday 5th July 9.40-10.00am Alsh 1
Using high-fidelity simulation as a tool to teach medical ethics and law
D Pillai, T Baker, A O’Keeffe, N Sathyanarayana
University Hospitals Coventry and Warwickshire

Background:
Ethics and law are key foundations in clinical practice and can often be mismanaged. The acquisition of these vital skills and knowledge can help reduce patient morbidity and mortality. Implementation of clinical ethics and law requires conceptual knowledge, critical thinking, communication skills, and the ability to assimilate multiple sources of information (1). Simulation can provide an effective and novel tool for clinicians to learn and practice these complex skills. Our aim is to implement a high-fidelity simulation programme to prepare clinicians for dealing with ethical and legal dilemmas.

Methodology:
From an extensive survey of foundation-year two grade doctors, we identified four common ethical and legal challenges. These were generated into high-fidelity simulation scenarios which incorporated ethico-legal issues within a medical emergency.
The scenarios included:
1. Deciding on escalation care plans and an ambiguous Advance Directive
2. Maintaining patient confidentiality in a needle-stick injury and gaining informed consent
3. Assessing mental capacity in a self-discharge scenario
4. Acting on a serious patient incident and communicating it as a duty of candour

We piloted this one-day course to six clinicians. The day comprised of high-fidelity simulation scenarios with detailed debriefs alongside tutorials and workshops. Pre-reading documents, such as the General Medical Council (GMC) Confidentiality guidelines were sent to candidates. Evaluation was collated using a questionnaire with a mixture of open and closed questions graded on a 5-point modified Likert scale. Thematic analysis was undertaken of the qualitative responses. Since the pilot, we have altered the programme and run the course three times with a total of 20 candidates.

Results:
The feedback received was positive with 100% of candidates (n=20) stating the course was “essential” praising the scenarios to be “clinically relevant” and "realistic". All candidates felt more confident in dealing with ethico-legal issues faced in emergencies (4.8/5), with 80% reporting being “significantly more confident”. Specific ethical scenarios also yielded positive results. 90% of candidates were “significantly more confident” in gaining informed consent and 80% were "significantly more confident" in complying with duty of candour in a serious patient incident. As a result of the course, 95% of the candidates reported that they will practice "significantly more safely" within the Trust. From the thematic analysis, the clinicians felt under-prepared in dealing with ethical and legal issues prior to the course, and the course addressed their training needs. Clinicians were keen for “more ethical scenarios, as this is a major challenge faced by newly qualified doctors”. The course also highlighted discrepancies in undergraduate training, as many commented that an earlier introduction of simulation to teach complexities of law and ethics would have been useful.

Discussion:
The course provides an opportunity to manage difficult ethico-legal scenarios and allows revision of skills in a safe learning environment. Challenges in creating the course included the high faculty to candidate ratio and thorough development of the scenarios to ensure they reflected current consensus in ethics and law. As recommended in the literature, we should be using a multi-disciplinary approach in teaching ethics and law, by using both physicians and philosophers (3,4). However, they must also have training in simulation debrief (5), reducing the available pool of potential course facilitators. The use of high-fidelity simulation appears to be a relatively novel tool in empowering doctors to manage difficult ethico-legal scenarios. More longitudinal research is necessary to review the objective impact of this course on clinical practice. We hope to offer this course to medical students and other healthcare professionals, and assess the validity of simulation as a tool in teaching ethics and law.

References:
Stealth Marking for Improved Quality Assurance in The Ethics and Law Assessment

D Thewlis, J Coleman
University of Birmingham

Background:
Medical professionalism and ethics are difficult areas difficult to assess prior to graduation. The University of Birmingham MBChB program includes an Ethics and Law module assessed by a written assignment in the students’ final year. Historically this assignment was assessed by a single examiner with sample moderation for quality assurance. Given this is the last opportunity for students to demonstrate professionalism in a written assessment it was felt that enhanced quality assurance measures should be put in place. The risk of construct-irrelevant variance is ever present in written assessments (1). The use of marking rubrics and blind marking have both been put forward as methods to reduce bias in marking (2,3). The use of a second marker is recognised as a way to increase the reliability of a written assessment(4) however this also decreases the feasibility of the assessment. The investigating team decided to pilot an electronic mark sheet which would provide some of benefits of a second marker without the need for increased work, whilst incorporating the use of blind marking and the a marking rubric.

Methodology:
A marking rubric was devised for the Ethics and Law Essay. Within the Excel mark sheet examiners were asked to pick specific anchor statements from the rubric for entry into drop down boxes. These were concatenated to create generic feedback for students in addition to the bespoke feedback examiners would provide. Each anchor statement was assigned a value which was hidden from examiners. These values corresponded to either an “Excellent”, “Good”, “Pass”, “Borderline Fail”, or “Poor” grade. The marking rubric provided to examiners displayed the approximate percentage each of these grades would receive overall, but did not inform them of the weighting of each domain. Domains included “background reading and research”, “relevance of case” amongst others. Examiners provide an overall mark out of 100 to each essay which will be termed the “awarded mark”. The “stealth mark” based upon the chosen anchor statements was visible to the investigators only. These data were compared to examine the level of inter-rater agreement between markers and stealth marks. Inter-rater agreement was defined as the examiner awarding a mark within 5% of that produced by the stealth marking formula. Marks for essays were excluded if the examiner had manipulated anchor statements so that they no longer clearly mirrored those in the original rubric. Where anchor statements had been manipulated, but with only subtle changes the investigators entered the value matching the closest anchor statement. The author’s essay marks were excluded due to a lack of blinding to the process. 319 essay marks were analysed for agreement. 190 of these were marked by relatively inexperienced markers (those with 1 or fewer years of marking).

Results:
Inter-rater agreement (agreement between awarded mark and stealth mark) varied from 0.5- 1.0 between different examiners. There seemed to be no difference between markers based upon level of experience. Mean agreement within the cohort of inexperienced markers was 0.78 whilst within the cohort of experienced examiners agreement was 0.80. The agreement value (actual mark given stealth mark) showed a range from -16.5 to +16 with a standard deviation of 4.4. 80% of marks demonstrated agreement when analysed across all markers, but with evidence of significant outliers at either end of the range.

Discussion:
This exercise demonstrated that whilst there is variability of marks provided between markers level of experience does not seem to be a strong indicator of more reliable marking. This tool could be used to identify which markers require a greater level of moderation following random sampling. Moderation should be targeted at those essays which have an agreement value of >10 and examiners with a lower agreement with stealth marks. In future research we will analyse how effective this is as a marker for targeted moderation.

References:

Presentation Details: Friday 5th July 10.20-10.40am Alsh 1
Flipping a Biochemistry Class within a Medical Curriculum: Impacts on Perception, Engagement and Attainment

H Fakhoury, H Fatoum, M AlDeiry, H Alahmad, J Enabi, S Kayali, Y Bawahab, K Hamweyah, E Masuadi, A Obeidat, C Lumsden
Alfaisal University

Background:
The flipped classroom has recently gained popularity in higher education, but little has been written about its application in the middle east or in the biosciences. The aim of this study was to assess the feasibility, acceptability and impact of flipping biochemistry classes in comparison to the traditional didactic program.

Methodology:
The study was conducted on first year medical students taking biochemistry at a University in Saudi Arabia. A series of short pre-recorded videos were used to replace traditional lectures. The freed lecture time was replaced by problem solving and discussion sessions. To gather their evaluation of the learning approach, participants completed an online survey. To study the effect of the learning approach on exam performance, the scores of the participants were compared in questions taught using flipped classroom versus traditional approach.

Results:
Participants noted that the effort needed for the course was similar regardless of the learning approach. Moreover, examination performance measured using single best answer multiple choice questions showed no difference between teaching methods. The participants did however express significantly better perception of the flipped classroom compared to the traditional approach.

Discussion:
Although achieving overall similar results regardless of the approach used by the instructor, the participants significantly favored the flipped classroom over traditional lectures. This study has demonstrated that the flipped classroom can be used in the teaching of the biosciences within a middle eastern setting, resulting in an improvement in student satisfaction and engagement in the course materials.

References:
Cardiac Arrest Club: Minimising Time to Defibrillation
F Charlton, R Webster, T Isaac, L Kelsey, K Jones
University of Bristol - Swindon Academy

Background:
All healthcare professionals should be able to recognise cardiac arrest, call for help and start resuscitation measures. The Resuscitation Council UK states that for all in hospital cardiac arrests, CPR should be started immediately and defibrillation (if appropriate) should occur within 3 minutes (1). Defibrillation within 3 to 5 minutes of collapse can produce survival rates of 50-70% (2). Simulation sessions for students at Swindon Academy currently do not include cardiac arrest and students only get formal instruction on using a defibrillator when they reach the second part of their final year. As such, they spend a great deal of time on the wards with little practical experience regarding what to do in cardiac arrest situation. Being faced with a cardiac arrest is a daunting prospect for many healthcare practitioners. This was a view shared by medical students at Swindon Academy who were keen for additional teaching in cardiac arrest management during their medical training. Therefore, we created ‘Cardiac Arrest Club’, an optional small-group simulation teaching session, aiming to improve students’ confidence in managing a cardiac arrest scenario and minimising time to defibrillation pad placement.

Methodology:
The session was advertised to years 3-5 at Swindon Academy. All attendees received a pre-reading sheet with a link to the Resuscitation Council’s lifesaver video and collapsed patient algorithm. They were asked to complete a questionnaire to assess pre-course experience of cardiac arrest and use a Likert scale from 1-10 to self-rate their confidence levels in managing various aspects of this scenario. At the simulation session, a brief recap of CPR and airway management was demonstrated and students were encouraged to practise these skills. The students then took part in repeated cardiac arrest simulations. They were expected to follow the collapsed patient algorithm including getting help, starting chest compressions, managing the airway and attaching defibrillation pads. During the simulations the students were also timed on how long it took them to start compressions, make and emergency call and apply defibrillator pads correctly. After the scenario they completed a post session questionnaire to reassess their confidence levels following the teaching.

Results:
We are continuing to run this project throughout the year and expect to have results from 80 students by the end of the academic year. 21 students in third to final year of medical school attended the first four sessions held. Before the session students were concerned about “not knowing what to do”, “not being helpful” and “getting flustered and forgetting”. Data was analysed using SPSS. Preliminary results on timings show:
- A mean improvement in time to compressions of 6 seconds.
- A mean improvement of time to emergency phone call of 20 seconds.
- A mean improvement of time to pads being applied correctly of 56 seconds.

Students also reported a statistically significant increase in confidence in managing a cardiac arrest scenario. Specifically:
- Confidence in arranging appropriate help increased by 4.0 +/- 2.3 (p-value 0.001) on the Likert scale
- Confidence in managing an airway increased by 3.0 +/- 2.6 (p-value 0.001)
- Confidence in performing chest compressions increased by 2.1 +/- 1.7 (p-value 0.001)
- Confidence in attaching the defibrillator pads increased by 3.8 +/- 2.5 (p-value 0.001)

Discussion:
Overall, students found the session beneficial describing it as ‘good practice and realistic simulations’. Their confidence significantly increased in all aspects measured, with time to defibrillator pads being placed decreased substantially.

References:
Exploring the association between how prepared Foundation Year 1 doctors feel for their first foundation post and their perceptions of their exposure to simulation training during medical school

O Adesalu, C Van Hamel
Basildon and Thurrock University Hospitals NHS Foundation Trust, Essex, UK

Background:
In 2018, the General Medical Council (GMC) Progression Reports showed that just 68.6% of newly-qualified junior doctors felt adequately prepared for their first post (1). The phenomenon of newly-qualified Foundation Year 1 (FY1) doctors feeling unprepared prior to commencing work is well-recognised in medical education research (2, 3). Responsibilities such as decision-making, prescribing and prioritising tasks are cited as areas in which trainees report experiencing difficulties (4,5). Through experiential learning, simulation training is a commonly used educational tool for students to learn the essential skills required to be safe junior doctors (6). This study aimed to investigate whether there was an association between newly-qualified FY1 doctors’ perceived exposure to simulation training at medical school and feeling adequately prepared for their first foundation post.

Methodology:
In 2018, an optional survey regarding preparedness was sent to FY1 trainees during their first foundation post. 962 responses were received. 723 respondents identified themselves to be UK medical school graduates. The UK medical schools (n=32) were ranked in accordance to the proportion of respondents replying “strongly agree” or “agree” to the statement “I was adequately prepared for my first foundation post”. They were then ranked on the proportion of respondents replying “strongly agree” or “agree” to the statement “I have had regular simulation training to prepare me for clinical work”. These were cross-referenced in order to identify whether there was an association between the highest and lowest ranked institutions for preparedness and perceived exposure to regular simulation training.

Results:
72.2% (n=522) of respondents agreed or strongly agreed that they felt adequately prepared for their first foundation post. 79.8% (n=577) of respondents agreed or strongly agreed that they had received regular simulation to prepare them for clinical work. 70% (n=7) of the top ten ranked institutions for preparedness were also in the top ten ranked institutions for perceived regular exposure to simulation training. 20% (n=2) of the bottom ten ranked institutions for preparedness also featured in the bottom ten ranked institutions for perceived regular exposure to simulation training.

Discussion:
The data demonstrates that whilst greater exposure to simulation appears to be associated with increased feelings of preparedness for being an FY1 doctor; perceived lack of exposure to simulation does not appear to be associated with feeling less prepared. This may corroborate current medical education literature that simulation is a useful educational tool to help prepare students for the role of junior doctor (6). However, it indicates that there may be more effective ways to prepare medical students for clinical work. For example, one of the medical schools ranked fourth for their graduates feeling adequately prepared yet 25th for perceived regular exposure to simulation training. There would be value in further research into alternative education methods that may be used alongside simulation training, in order to ensure that preparation for working as a foundation trainee is as effective as possible. This study investigated whether FY1 doctors believed they had been received regular exposure to simulation training. There would be benefit in a qualitative study exploring FY1 doctors’ experiences of simulation training and what they believe constitutes ‘regular simulation training’.

References:
1. General Medical Council, Progression Reports 2018.
Final year surprise emergency bleeps
A Pereira, R Webster, G Dixon, K Jones, JL Daurat
Bristol University - Swindon Academy

Background:
One of the most stressful components of working as a Foundation year one doctor is carrying the emergency bleep. It has been reported that most foundation doctors are expected to carry an emergency bleep (1). Being the first to respond to an emergency call can be a daunting moment, but prompt assessment and management of the patient is essential. It is expected that foundation doctors can initiate and perform immediate adult life support comprising cardiopulmonary resuscitation (CPR), airway management and defibrillation (2). For University of Bristol students, this is taught through an Immediate Life Support course during final year. The Resuscitation Council states that for all in-hospital cardiac arrests, CPR should be started immediately and defibrillation (if appropriate) should occur within 3 minutes (3). However it has been noted that novices attending cardiac arrests are often less efficient at reaching this point, with general confusion and not knowing what steps to take next noted as key reasons for delay (4). We aimed to establish current level of practice in final year medical students in a planned simulation setting, and if this differed to practice in an unanticipated simulation.

Methodology:
31 final year medical students at Swindon Academy in their final clinical placement undertook a simulation session where a patient deteriorated into cardiac arrest and they had to perform initial management to Intermediate Life Support level. They were then assigned a “surprise bleep” session where students received an emergency call requesting them to immediately attend the simulation suite during a normal ward day. In this simulation they encountered a patient that again deteriorated into cardiac arrest. The simulations were undertaken in small groups, the cardiac arrest began once at least three students had arrived. The scenarios were pre-determined and culminated in the standardised common stem of a ventricular fibrillation/ventricular tachycardia arrest. An observer timed both the structured simulation and surprise simulation on the following parameters: 1. Time until arrival in sim suite (for Emergency Bleep Sim only) 2. Time from no pulse to CPR commencing 3. Time from no pulse to completing 2222 call (for structured simulation only) 4. Time from no pulse to Pads on 5. Time from no pulse to first shock Students were surveyed at the beginning of the clinical placement and after their surprise simulated crash bleep. This aimed to assess confidence regarding holding the crash bleep and well as various aspects of managing the cardiac arrest. Timings in the two simulations as well as pre and post confidence levels will be compared using SPSS.

Results:
Results will be available later in the year. The study is based on the successful Cardiac Arrest Club run in the Christmas term, which showed preliminary results of improved confidence at managing aspects of the arrest and decreased time taken to commencing CPR, calling for help and attaching defibrillator pads when taking part in a structured simulation.

Discussion:
Simulation teaching utilising a bleep has been shown to be popular amongst medical students in preparation for practice (5), we anticipate that our sessions will be similarly well received and that the practice provided will improve student confidence in managing a cardiac arrest. We anticipate that student performance will differ between the planned and unanticipated simulations with factors such as stress affecting the outcome measures.

References:
Improving emergency airway training and competency for foundation doctors
G Hirst, R Brookes, J Garwood, R Brookes
Royal Devon and Exeter NHS Foundation Trust

Background:
Providing evidence for development of competencies has become the cornerstone of postgraduate medical education (1). As educators it is imperative that we provide the opportunity and support to our trainees to do this (2). Emergency skills assessment such as airway management can be troublesome for junior trainees to evidence in their portfolios (3). In our institution, our experience was that work-place based assessments (WBPA) for Foundation Training (FY) Doctors in relation to airway management were often difficult to complete or were signed off by a non-airway doctor. Our aim was to develop an educational intervention to improve training and competency development for FY trainees.

Methodology:
A single cohort (n = 42) of FY (year 1) was surveyed to establish their experiences of airway management, self-assessed competence, and behaviours. Half of the cohort (n = 21) were then randomly selected to attend an ‘airway training day’, with 1:1 supervision by a senior anaesthetist in a theatre suite following patient consent. Skills covered and practiced were mapped against the relevant curriculum (4). There was a post intervention survey following the training day and again at 6 months.

Results:
Of the cohort (n=42), 45% found difficult in getting airway competencies assessed, 73% of WBPA were assessed by a non-airway specialist, 50% were completed during an emergency situation. 40% of trainees had ‘very little’ confidence in basic airway skills. All trainees in the intervention group (n = 21) completed the pre, post, and follow up surveys. 100% found it a positive experience. Self-rated confidence scores of emergency airway management skills demonstrated significant improvement (50% v 96%). 95% of trainees felt it significantly improved their airway skills. On follow up at 6 months, 85% of trainees felt that the training day continued to have a positive effect on their behaviours and attitudes.

Discussion:
The airway training day provided opportunity for FY to undertake airway skills under the guidance of an airway expert and allowed for completion of required competencies in an elective setting. It demonstrated a significant improvement in ability and confidence to undertake basic airway skills when compared against the non-intervention group. At six months follow up, self-assessed confidence and skill level was increased when compared to the non-intervention group. The training day provided a safe supported environment in which to undertake airway skills. We have demonstrated that our intervention improves skills, confidence, and an extended effect on behaviours for emergency airway management amongst FY doctors.

References:
4. Tallentire VR, Smith SE, Wylde K, Cameron HS. Are medical graduates ready to face the challenges of Foundation training?. Postgraduate medical journal. 2011 Sep 1;87(1031):590-5.
Managing Incidental Findings from Educational Ultrasound: Best Practice Guidelines from a Scottish Medical School
O Varsou, A Hughes, R Humphreys, A Laidlaw
University of Glasgow & University of St Andrews

Background:
The incorporation of ultrasound training in undergraduate curricula is increasing at a fast pace (1). The serendipitous discovery of a potential incidental finding (IF) in student volunteers, who participate in ultrasound sessions as peer models for demonstration purposes, is an important aspect not to be neglected. These IFs could be defined as “unexpected findings with potential health implications, that also include false positives most likely resulting from ultrasound artefacts, identified on the person being scanned” (1). As educationalists, it is our professional and ethical duty to have processes in place for the management of IFs. Standardised mechanisms will mitigate undue distress (2) resulting from potential variability in practice (1). We have produced best practice guidelines as a written policy exploring consent processes, debriefing sessions, and our role as teachers in this context. Our aim was to ensure that a standardised mechanism is in place at the University of St Andrews School of Medicine, Scotland UK for the management of IFs involving student volunteers and simulated patients participating in clinical skills sessions not only limited to ultrasound scanning. We would like to disseminate our experience and preliminary results with the wider medical education community.

Methodology:
The planning stage was an integral part of this process including literature search, seeking expert opinions, on-going discussions with the local risk advisor and safety officer, and independent review by the School of Medicine Ethics committee (approval code: MD13175). This stage flushed out important logistical and ethical concerns that we addressed in the guidelines. The annual signing of the School Agreement/Student Contract, according to which our medical students confirm their participation as peer models in clinical skills sessions, alongside tailored pre-sessional information linked to each ultrasound sessions are viewed as written informed consent. In the pre-sessional information, it is emphasised that such sessions do not carry any diagnostic value and instead they are used purely for educational purposes in terms of consolidating scientific knowledge and linking this to related clinical applications. It is also stated that there may be a possibility of identifying a potential IF and that participation in ultrasound scanning is voluntary. In the case of an IF, the student volunteer is invited to attend a face-to-face debriefing session with the lead tutor during which they are advised about follow up steps and are given a template letter for their general practitioner (GP). This session mitigates any immediate fears without providing a false sense reassurance. The template letter, which does not contain any medical information, standardises the written information provided. Confidentially and privacy are maintained at all times during the above discussions and thereafter. It is important to highlight that teaching staff, clinical or non-clinical, do not make a diagnosis as this is outwith our role as teachers. The same process applies to simulated patients with potential IFs.

Results:
The written policy has been implemented since October 2017 (3) with no complaints from student volunteers, simulated patients, educationalists, and GPs. In this presentation, we will endeavour to discuss our local guidelines with preliminary data collected on IFs since the introduction of the above written policy including summary statistics on reported cases, cohorts involved (i.e. students volunteers or simulated patients), and teaching sessions.

Discussion:
The above guidelines have allowed us to standardise the management of IFs in educational ultrasound and throughout all clinical skills sessions. Consensus recommendations from a multidisciplinary panel of experts - medical educationalists, ethicists, risk/liability advisors - are needed with the aim of standardising IF mechanisms across all institutions (1).

References:
Recognising skills attrition and supporting medical students returning to the Birmingham Medical Degree programme; the ROCS (Revision of Clinical Skills) course

D Thewlis, C Nath, J Coleman
University of Birmingham Medical School

Background:
There is clear evidence that time spent out of practice impacts on the clinical abilities and confidence of doctors returning to clinical work\(^1\). Less is known about the timing of this attrition. Studies suggest that it manifests between 3 and 18 months after discontinuing practice\(^2\). We believe this evidence is translatable to medical students taking time out of the medical degree (MBChB) programme and seek to share a successful initiative that responds to the impact of skills attrition on this cohort of students. The ROCS (Revision of Clinical Skills) course is underpinned by the translation of existing evidence and educational theory. Since the advent of revalidation, employers and regulators have looked more closely at the competency of qualified doctors and have responded to this evidence by implementing more explicit return to work procedures\(^3\). These provide the returning clinician with tailored training opportunities and enhanced supervision. Many medical students also take time away from their clinical learning environments. A significant number of students take time out of their MBChB programme to pursue an intercalated degree course\(^4,5\). The majority of students undertake this after their third or fourth year, by which point they will have spent significant periods of time learning within the clinical environment. Other students take time out because they have failed to progress internally, or because of personal circumstances. The ROCS course does not seek to assess competency. Students rejoining the MBChB will undertake formal summative assessments within the programme. The initiative seeks to reintroduce students to their community of practice\(^6\), to enable them to re-establish relationships with peers and to provide exposure to a wide range of core clinical skills. The ambition of the course is to increase the confidence of participants, and encourage them to become "hands on" quickly.

Methodology:
We invite all students returning to the final and penultimate year of our MBChB to participate in the ROCS course, an intensive one day programme. This allows them to get hands on practice with: core clinical examination skills, a high-fidelity simulation scenario, communication scenarios, a BLS refresher training and a range of practical procedures. The course is facilitated by an engaged group of experienced clinician educators. Faculty also includes clinical skills trainers. The day is supported by associate clinical educators and role players who provide an authentic patient experience. Students attending the course receive short plenary sessions to help them reflect, increase their self-efficacy and enable them to have a better understanding of their learning needs.

Results:
All invited students attend the ROCS course. Exemptions are permitted if students have otherwise demonstrated that they have undertaken relevant practice continually during their time away from the MBChB programme. Participant feedback suggests that our targeted initiative increases confidence to quickly re-establish hands on learning and contribution to patient care within the clinical environment upon return to the programme.

Discussion:
Medical students returning to the MBChB programme will have competencies assessed formally within the course and subsequently via the MLA. We recognise however, that students returning after time away from the clinical environment can feel apprehensive about re-engaging with patients, and in particular about performing clinical skills. The ROCS course provides an immersive and authentic opportunity to undertake a wide range of clinical skills in a supportive environment. It also provides the opportunity to signpost ‘struggling’ students to relevant support within their placements. The course offers scope to collaborate with senior students who may be a valuable addition to the faculty. Additional opportunity exists for regional collaboration in order to provide this course at one site, for students from a number of medical schools.

References:
Re-teaching the lost art of plaster of Paris application
C Kocialkowski, L Hainsworth, O Pearce
Southmead Hospital, Bristol

Background:
Junior doctors rarely receive any formal training in the application of plaster of Paris, despite this being a common treatment modality for many fractures and soft tissue injuries in the emergency department, as well as in plastic and orthopaedic surgery (1). Many problems can arise from the poor application of plaster of Paris casts, including skin pressure necrosis, soft tissue contractures, not to mention inadequate treatment of fractures (2). In order to try and address these concerns, we established a regional training day for junior doctors in the application of plaster of Paris.

Methodology:
The teaching was established with the help of a senior plaster technician. Participants were initially asked to apply a wrist backslab for a Colles type fracture in order to assess their prior skills. These plaster casts were then assessed by the senior plaster technician with regards to length of plaster, coverage of the distal radius, freedom of thumb and metacarpo-phalangeal joints, soft tissue protection, plaster moulding and efficiency of application. Participants were given a score 0-5 for each component, with a maximum total score of 30. Participants then completed the remainder of the educational activities, which included presentations on the conservative management of fractures using plaster of Paris. There were also several practical sessions which included the application of long and short upper and lower limb casts, as well as reduction manoeuvres for wrist, ankle, carpal and hand fractures. At the end of the training event participants were asked to re-apply a wrist backslab and this was again assessed by the plaster technician to determine their progress.

Results:
Prior to training event participants completed a questionnaire which demonstrated that whilst 87.5% of them applied plaster of Paris regularly, only 25% had ever received any formal training. On assessment of application of a wrist backslab, the most common mistakes in the initial plaster application were inadequate soft tissue protection and plaster moulding. The mean total score prior to the teaching was 8.9 (range 4 to 20), which significantly improved at the end of the day to 23.9 (range 14 to 29) (p<0.001 paired Student t-test). The greatest improvements in performance occurred in plaster moulding (mean score increase 0.6 to 3.5) and soft tissue protection (mean score increase 0.9 to 3.5). The confidence of participants in applying a plaster also improved from 25 to 90. General feedback from participants after the training event indicated that they greatly appreciated the formal training in application of plasters, as well as the different fracture reduction manoeuvres that were demonstrated, and they would feel much more confident in applying plaster casts in the future.

Discussion:
Our study has demonstrated that there is a lack of formal training for junior doctors in the application of plaster of Paris. In addition many trainees make significant errors when applying basic plaster casts. The most common errors are inadequate plaster moulding and soft tissue protection, which may compromise the effectiveness of the fracture and also cause significant soft tissue complications. Our training event in the application of plaster casts has shown that significant improvements in technique and performance can be achieved with good formal instruction in plaster application. This not only improves the confidence of trainees in applying plaster casts in the workplace but also hopefully ensures that good fracture management is achieved and soft tissue problems are avoided.

References:
See one, do one, teach one: Teaching trainees neuraxial anaesthesia. What is the evidence?

J Garwood
University of Exeter, College of Medicine and Health

Background:
Central neuraxial blockade (CNB) is a type of regional anaesthesia used by Anaesthetists to provide both anaesthesia and analgesia for patients, for a wide range of procedures, with the added benefit of a reduction in morbidity after major surgery (1,2). It represents a significant proportion of workload for both anaesthetists and those in training. Teaching trainees CNB has traditionally been a ‘see one, do one’ philosophy (3), with often much more emphasis placed on novice trainees initially learning the practical skills by observation and copying methods demonstrated to them by their seniors. How we introduce and train our novice and core trainees to perform CNB has been a topic of discussion amongst anaesthetic educators for some time. The most effective methods in how we teach and train our novice anaesthetists to perform CNB remains unclear. The evidence for which educational methods are the most effective in teaching CNB skills is presented.

Methodology:
This systematic review was planned, conducted, and reported according to ‘preferred reporting items for systematic reviews and meta-analyses’ (PRISMA) standards. A research question was developed using a PICO (Participants, Intervention, Comparison, Outcome) method. A search protocol was written to guide search methods and explicitly define inclusion and exclusion criteria, and to guide how the quality of results was to be interpreted and evaluated. Medline, PubMed, ERIC, Cochrane library, PsycInfo, and HMIC databases were searched through to June 2018 and included studies involving CNB skills teaching. A total of 115 studies were found and compared against inclusion/exclusion criteria. After initial screening, 52 were excluded from search, and 68 studies were retrieved for full analysis. 54 studies were further excluded after review of each paper Data was extracted and study quality as scored using the MERSQI scale (4). Outcomes for each intervention were also plotted against a modified Kirkpatrick’s model (5).

Results:
14 papers were included in the review. The mean MERSQI score was 12.43 (range 8.5 - 16) with a possible score from 5 (minimum) - 18 (maximum). The median score was 12.5. Standard deviation was 2.35 (95%, 1.96 (CI 11.15 - 13.70)). Nine out of the fourteen studies had MERSQI scores greater than or equal to 12. The modal outcome was changes to knowledge and skills (2b). Interventions identified were Ultrasound (2 studies), Educational multimedia (4 studies), Use of simulation/simulator (8 studies), Feedback delivery (1 study), Mental imagery (1 study), Learning curves (1 study).

Discussion:
The use of simulation, ultrasound, and standardising teaching have been shown to have significant positive outcomes as educational interventions when teaching trainees. The evidence has highlighted how, low cost, low technology can be just as effective, and should be considered carefully in resource and budget planning for departments and universities. Ultrasound should be considered as a first line teaching tool for novice trainees. Learning curves remain an important piece of knowledge for trainers to understand to allow for effective coaching of a trainee. We should also ensure that the feedback that is delivered is done at the right time to allow maximum absorption and effect. Planning and reflection may influence the quality and outcomes, of both learning and research quality. The use of ultrasound imaging and simulation has shown to have the most significant effect on changes to learning outcomes and behaviours for trainees when assessed against the Kirkpatrick model. Further large scale, higher quality studies need to be undertaken to confirm these conclusions.

References:
Ultrasound for Undergraduates: Should we be teaching hands-on ultrasound skills to medical students?
G Dixon, S Perry, J Ross, A Pereira, T Slade
University of Bristol

Background:
The clinical use of ultrasound to aid diagnosis and procedural skills has traditionally been a postgraduate skill 1. The latest Royal College of Radiologists guidelines actively encourage an expanded role for the appropriate use of ultrasound in undergraduate teaching programmes 2. This is to reflect the increased use of ultrasound outside of radiology departments by a range of other specialties. Ultrasound has a broad range of uses in bedside clinical assessment including the examination of joint effusions, identification of safe sites for pleural intervention and the selection of appropriate veins for peripheral or central venous access. The purpose of this study was to investigate the potential benefits and pitfalls of the use of point of care ultrasound in undergraduate medical education at the University of Bristol.

Methodology:
We designed a pilot ultrasound symposium to be delivered to final year medical students who were undertaking their “Preparing for Professional Practice” module at the Great Western Hospital in Swindon in February and March 2019. The Symposia, run in both February and March 2019, are aimed to introduce students to the bedside uses of ultrasound. The 3-hour sessions will introduce the basic physics of ultrasound, clinical governance issues and 4 hands-on practical stations. The stations will include thoracic ultrasound, vascular access, echocardiography and the use of ultrasound in the emergency department. A pre-course questionnaire was designed to assess the students’ previous experience of ultrasound and their pre-conceived opinions of its clinical use. During the course, data was gathered to assess the student’s ability to identify relevant anatomy and achieve simulated ultrasound guided vascular access. Following the course students were invited to provide feedback on the symposium.

Results:
31 students will take part in the ultrasound symposia run in February and March 2019. This is the first year the ultrasound symposium has been planned at the Great Western Hospital. The results from the assessments outlined in the methodology above will be reported and analysed.

Discussion:
With analysis of the results we hope to demonstrate the value of introducing medical students to ultrasound and that the foundations of basic competencies can be achieved with a single symposium. The future aim is to incorporate the clinical use of ultrasound across the undergraduate curriculum however this will require further cost-benefit analysis. There were limitations to the study for example recruiting tutors with sufficient ultrasound experience, only 2/13 clinical teaching fellows at the Great Western Hospital had appropriate ultrasound experience to be able to teach. Furthermore the expense of acquiring ultrasound machines may limit the immediate role out of a more integrated curriculum. However we hope that as the cost and portability of ultrasound machines improve, we will see increased medical student exposure to ultrasound.

References:
5. Feilchenfeld Z. Ultrasound in undergraduate medical education: a systematic and critical review. Medical Education in Review. 2017. 51(4)
Will clinical signs become myth? Exposure to and confidence examining clinical signs amongst final year medical students

King's College London

Background:
Physical examination is fundamental to the diagnostic process and our patients' conception of our roles as doctors. Yet, the increasing importance of laboratory and imaging investigations in diagnosis has not only seen the extinction of numerous eponymous signs once central to the physician's repertoire, but a decrease in emphasis on the physical examination in diagnosis. Medical students therefore learn in a different environment largely centred around computer rooms and offices, as opposed to by the bedside(1). Nevertheless, as doctors they will soon have to examine patients independently, and generate diagnoses from the physical examination. In the process of developing our teaching course, we have examined the effect of these trends on today's medical student, and whether their teaching and placements provide them with the exposure necessary to evaluate patients through the clinical examination.

Methodology:
Across 3 sites in three separate hospital trusts around London we have developed a bedside teaching course for final year medical students approaching their final practical examinations. Approximately 200-300 students have been taught and we have received feedback from 90 of them on their prior exposure to clinical signs, experience of bedside teaching and confidence examining patients. Feedback included asking students to report whether they had ever seen before in clinical practice a large range of approximately 100 common to rare cardiovascular, respiratory, abdominal, neurological and miscellaneous signs/presentations. After the course they were re-surveyed to establish the exposure our focused teaching course had brought them and how it had altered their confidence examining patients and eliciting signs.

Results:
78/100 signs/presentations listed had been seen by less than 50% of students and only 5 had been seen by more than 75% of the students (hypertonia, rheumatoid arthritis, COPD, clubbing, aortic stenosis). Common signs such as the murmur of aortic stenosis had eluded 20% of students and only 25% and 50% had elicited the signs of aortic regurgitation and pleural effusion respectively. Stigmata of liver disease were the only collection of signs with consistently good exposure amongst the students. There is often disconnect between some of the signs / presentations students report seeing. For, example whilst 83% say they have appreciated increased tone before, only 40% have elicited an upgoing plantar response and only 10% a positive Hoffman’s reflex, suggesting only superficial and transient exposure to clinical signs. With only 60% reporting ever seeing a raised JVP and 45% having ever heard inspiratory crepitations, we might question the utility of future junior doctors’ clinical assessments of volume status, particularly in those at risk of heart failure. Prior to the course, Likert scale assessments reported students felt unprepared for their final OSCE examinations (2.5/5), felt little confidence in their ability to successfully elicit clinical signs (2.6/5) and felt they hadn’t received appropriate amounts of bedside teaching (2.4/5). Qualitative responses suggested that most prior bedside teaching received was often ad-hoc and of little detail, although was still greatly appreciated when it occurred. Exposure to 30-40 patients during our course increased their confidence and feelings of preparedness for their final OSCEs (4.87/5).

Discussion:
The survey revealed poor prior exposure to even the most common signs/presentations, with only a minority having been seen by the majority of students. Few students felt they had received specific guidance on eliciting clinical signs before and this likely explained the little confidence they reported in eliciting them. While clinical signs are not perfect tools, this illustrates the importance of developing programmes for instruction and guidance for medical students on eliciting clinical signs if we are to maintain the clinical examination as a meaningful part of the diagnostic process.

References:
Background:
The differential attainment of trainees whose place of primary medical qualification is not the UK was subject to a Judicial Review in 2014. Although the judgment found no evidence of discrimination in the operation of the MRCGP exams, it did describe a responsibility on the part of Deaneries/Local Education Training Boards to support international medical graduate (IMG) and Black and Minority Ethnicity (BME) candidates in exam performance. More recently research has confirmed the importance of socio-linguistic factors. The North East and North Cumbria area has the poorest recruitment rate in the country, and exam results below the national average. 43% of the School of Primary Care trainees attempting the exams are IMGs compared to 19% nationally. Therefore, a programme providing linguistic support for struggling IMG/BME trainees is being piloted to reduce the gap in differential attainment.

Methodology:
As part of a support package, a pilot programme has been commissioned with two local universities who have experience in providing linguistic support to international students. This programme has been designed to support individuals who are struggling with some aspect of language, which may lead to failure to complete their training.

The following categories have been identified:

• Spoken language with patients or colleagues
• Written language in reports or clinical records
• Comprehension in the consulting room or with colleagues
• Accent or rate of speech (theirs or their patients)
• Dialect or colloquialism
• Sociolinguistic competence: pace, volume, intonation, body language, turn-taking, interactive style, cultural influences (‘manner’) 
• Applied language competence (consultation skills): question forms, signposting, summarising, sequencing, explaining, negotiating etc. Each trainee will receive 15 contact hours of support, having been referred to the programme by their training programme director. The training will be held over 5 sessions of 3 hours each, to limit time spent on travel and allow trainees to practice techniques learnt between sessions. The content will be based on the discussions and diagnostics carried out at the first meeting. Up to 5 trainees with similar language issues may be grouped together to share the learning and personal experiences.

Results:
The programme is based on a successful pilot with a trainee in 2017. Two cohorts of the programme have been commissioned running in Autumn 2018 and Winter 2019. Informal feedback has been positive and suggests it has met their learning needs. The decision to offer this intervention with fewer sessions of a longer duration, clustering around various locations within our region has been a significant and important factor in our success in delivering this intervention across our large and sparsely populated geography. We will have the results of the formal evaluation available by May 2019.

Discussion:
Trainees have described challenges of coming from a different family decision making paradigm, a different consulting paradigm, and/or a different educational paradigm from the UK norm. Many only speak English while at work, while for some reflection and critical thinking is not the norm. This training should not be regarded or labelled as remedial, nor should it be offered because of the protected characteristic or IMG status. It is part of a package offered to those who, because of their prior experience and training, are taking longer to acclimatise and pick up the nuances of consultation in the rather complex case load in the UK. It is hoped that this training will improve local success rates for such candidates sitting MRCGP exams, increase their likelihood of completing GP training, while enhancing their understanding of cultural and linguistic nuance to improve their consultation skills and patient care.

References:
How can pharmacists develop patient-pharmacist communication skills? A realist review
A Kerr, C Kelleher, T Pawlikowska, J Strawbridge
RCSI Dublin

Background:
Good patient-pharmacist communication improves health outcomes (1). There is, however, room for improving pharmacists’ communication skills. These develop through complex interactions during undergraduate pharmacy education, practice-based learning and continuing professional development. Research is needed to determine how best to approach teaching patient-pharmacist communication. This review asks what works for whom, how, and why for pharmacists to develop interpersonal pharmacist-patient communication? The aim of the research is to understand how educational interventions, to develop patient-pharmacist interpersonal communication skills, produce their effects.

Methodology:
A realist review approach is being used to synthesise the literature to make sense of the complexities of educational interventions. Realist review methodology explores the link between context, mechanism and outcome. In our review we iteratively progress through the various stages of clarifying scope, locating existing theories, searching for evidence, appraisal of papers, data extraction and synthesis (2,3). A scoping review revealed a number of substantive theories, which, along with focus groups with students and staff, were used to develop initial programme theories. The initial programme theories are being tested and explored based on published literature retrieved from database searching. Judgements have been made on the relevance and rigour of the retrieved literature. Synthesis, testing and refinement of the initial theories will describe and explain links between contexts, mechanisms and outcomes of educational interventions for communication development in pharmacy.

Results:
Studies were heterogeneous with respect to rigour and the degree of relevance for exploring mechanisms. Initial findings suggest that experiential learning and practicing communication, such as with simulated patients, appear to work for students and pharmacists in various contexts. Initial mechanisms identifying how these interventions work include practice, repetition and contextualisation. These trigger reflective and increased confidence mechanisms, which can improve communication skills.

Discussion:
The review will provide an analysis of what works when, for whom, how, and why, for educational interventions for interpersonal patient-pharmacist communication development and potential barriers to communications training. Ultimately, we plan to provide pharmacy educators globally with evidence for how best to incorporate educational interventions for communications skills development into pharmacy curricula in their context and for life-long learning opportunities for pharmacists.

References:

Board: B3
Understanding patient's perspectives of disease; communication skills teaching through video testimonies of real patient experiences.

C Priest, M Young, D Alder, L Bowen, Z Brown, A Gosal, C Oliver, P Davies, S Jenkin, A Samuels
Gloucestershire Academy, University of Bristol

Background:
Bristol medical school’s curriculum is undergoing radical change, with an enhanced focus on communication skills development. The importance of ensuring this teaching leads to high quality communication between doctors and patients is well established (1), and therefore mandated (2). Current drives to reduce inpatient stays can erode student’s opportunities to engage directly with patients (3). Evidence advocates the use of video to support and enhance medical education, by providing compelling scaffolding around which to build knowledge (4). In this study patient testimony videos from an educational website called Speaking Clinically - an extensive collection of short movies in which patients talk frankly and openly about their medical conditions - were incorporated into teaching sessions, with the aims of enhancing sessions, improving student confidence in their communication skills and informing future curriculum construction.

Methodology:
Ethical approval was obtained from the University of Bristol. Second year medical students at Gloucestershire academy undertook three communication skills teaching sessions. The first two ‘standard’ sessions ran as advised by the University; with students taking turns to experience a simulated patient consultation, followed by observer feedback. The third session included relevant, integrated videos from Speaking Clinically, which students watched following the consultation. Feedback was then collected via a questionnaire, which evaluated; student’s previous use of the resource, perceived usefulness of the clinical videos, what impact videos had on student’s confidence in approaching patients and whether such videos could enhance future teaching.

Results:
Thirteen students took part in the study. Students reacted positively to the videos with 100% of students reporting that videos enhanced the session, compared to the ‘standard’ session. Students also felt more confident in empathetically communicating with patients, after integrating the videos into the session. Qualitative analysis showed that students reported overwhelmingly positive views regarding the use of video. They particularly valued the real life experiences expressed through the patient’s point of view that the videos demonstrate.

Discussion:
The novel communication skills teaching model proposed through this study found that integrated patient testimony videos bring an added value to student’s teaching and increases confidence in their communication skills. At a time when NHS pressures can make face-to-face teaching with patients more challenging, videos may provide a viable alternative to augment student's education (5). In future these changes could be incorporated into medical school curricula to bring a wider added value to communication skills teaching.

References:
Using Video Simulation to Improve Ward Round Documentation
R Webster, F Charlton, L Ting, J Ford, H Bothwell, J Taylor, K Jones
University of Bristol - Swindon Academy

Background:
Accurate medical documentation is important for patient safety and care; enabling inter-professional communication and helping facilitate patient flow and timely discharge. This is highlighted in General Medical Council (GMC) guidance which states that newly qualified doctors must be able to ‘elicit and accurately record a patient’s medical history’ and be able to safely and clearly pass on information using written methods (1). It has been found that many ward rounds not accurately recorded, with one study finding that only 6% of patient-surgeon conversations are appropriately documented (2). Medical students are encouraged to document in the patient notes when on clinical ward rounds, yet have often never been formally taught how to do this. We decided to introduce a new teaching session at Swindon Academy to teach students how to document a ward round. The aim was to improve students’ documentation of ward rounds in line with GMC, Medical Defence Union (MDU) and Royal College of Physicians (RCP) guidance.

Methodology:
The teaching session was given to year three students on their junior medicine and surgery placements. Students were asked to document two patient reviews (one medical and one surgical) from a video-simulated ward round. Throughout the video they had access to a mock ward list, similar to that used by junior doctors. Following the video, a tutorial was then delivered on how to document a ward round. It included exemplars of well-documented patient reviews. The video was then repeated and the students and were asked to document the ward round again. All ward round documentation was then marked by one clinical teaching fellow (CTF). They used a structured mark scheme, based on documentation guidance produced by the GMC, MDU and RCP. (3,4,5) For comparison with qualified doctors, the same videos were then shown to a group of 6 CTFs, varying in experience from 3 years to 5 years post-graduation. These were also marked by the same CTF using the same mark scheme.

Results:
We are continuing to run this project throughout the year. Initial results from the first cohort of nine students are described below. Of the nine students, only two had previously documented in patient notes and no student had ever received a formal tutorial on ward round documentation. Data was analysed using SPSS. Students’ scores increased significantly after the teaching session compared with before:

- Surgical scenario: Mean student score increased from 9.8 to 17.8 out of 32, an increase of 8 +/- 3.0 (p-value 0.001). This compared with a mean CTF score of 24.7.
- Medical scenario: Mean student score increased from 7.3 to 17.3 out of 30, an increase of 10 +/- 3.8 (p-value 0.001). This compared with a mean CTF score of 21.2.

Discussion:
The standard of documentation improved after the teaching session. In particular, it was noted that key patient identifiers were more frequently included, and overall, the notes had greater structure and were easier to read. However, despite the teaching, explanation to patients and relatives was still poorly documented. Interestingly, this was also the area where the CTFs scored poorly.

References:

Board: B6
Doctors' attitudes to, beliefs about, experiences of, and suggested improvements for regulation of professional competence

E Galvin, A Wiese, J O'Farrell, J Cotter, D Bennett
University College Cork

Background:
Doctors have a duty to engage in lifelong learning as they progress along the continuum of medical education and move beyond formal medical education and training. Regulation of professional competence (RPC) operates internationally, with the aim to support doctors in developing and maintaining good professional practice throughout their professional lives, but remains a highly contested area. Understanding the attitudes, beliefs, and experiences of doctors in regards to RPC is essential for those who oversee and operationalise the process. Policymakers and regulators need an enhanced shared understanding of doctors’ issues with RPC which will support their joint-working to enhance doctors’ engagement and compliance into the future. Hence, the study aimed to explore doctors’ attitudes to, beliefs about, experiences of, and suggested improvements of RPC.

Methodology:
The design of the questionnaire was underpinned by the Theory of Planned Behaviour1. To map areas of relevance and interest for inclusion in the questionnaire, we held three focus groups with doctors to explore the topic. Piloting was undertaken, and following the necessary edits, the questionnaire was finalised. The survey comprised of Likert-type items and free-text questions that aimed to capture participants’ attitudes and beliefs about RPC. The survey was distributed by email by the Irish Medical Council to all registered medical practitioners (N = 13,093) during the 2018 annual retention process. The data was analysed using SPSS and descriptive statistics relating to demographic information, attitudes, beliefs and experiences were generated.

Results:
A sample of 5379 doctors responded to the survey. Analysis of the survey items revealed some discrepancies between doctors’ beliefs about the value of RPC and their compliance with the process. A Chi-square test identified a significant association between participants perceptions of whether RPC benefits are worth the time, effort, and expense involved and their intentions to comply with RPC requirements. Even though participants who agreed were more likely to report that they intend to comply with RPC requirements a noteworthy number of participants did not perceive the value of RPC yet this not deter them from complying with RPC requirements. The majority of participants believed that RPC encouraged them to reflect more on their professional development and continually learn and keep up to date. Despite these beliefs, participants recognised important barriers to their participation in RPC including lack of protected time, expense, and dissatisfaction with the quality and content of activities. Most participants agreed with the suggested ideas of using a quality improvement initiative and colleague feedback to assess their professional competence. Other suggestions for improvement included the provision of more online activities, protected time and flexibility in the annual requirements.

Discussion:
Findings from this study demonstrate that while compliance with RPC is high among doctors, there are a number of issues that may influence doctors’ satisfaction and engagement with the process. Compliance cannot be interpreted as support for or belief in the value of RPC and may mask negative attitudes and experiences. By better understanding how these factors shape attitudes and behaviour towards RPC consideration can be given to solutions which can help to shift prevailing attitudes towards one that embraces competence assurance and lifelong learning.

References:
Mapping the literature on doctors’ and stakeholders’ experiences, attitudes and beliefs about the regulation of professional competence: a scoping review
A Wiese, E Galvin; I Korotchikova, D Bennett
Medical Education Unit, University College Cork

Background:
In the latter part of the continuum of medical education, when doctors move beyond formal medical education and training, doctors have a duty to engage in lifelong learning. Regulation of professional competence (RPC) operates internationally, with the aim to support doctors in developing and maintaining good professional practice throughout their professional lives, but remains a highly contested area. Confusion about the purpose of RPC and its relevance to practice are among the many objections raised. If doctors are to engage enthusiastically with RPC, its processes must continually evolve to meet the needs of doctors, patients and healthcare employers. This scoping review aims to map the literature related to doctors’ and stakeholders’ experiences, attitudes and beliefs about RPC.

Methodology:
Scoping review is a method used to comprehensively map the literature available on a topic and involves identifying key concepts, sources of evidence and gaps in the research. Our review was informed by Arksey and O’Malley, and Levac’s methodological frameworks (1, 2). Using relevant terms, we systematically searched electronic databases, RPC policy documents and reports, and backward and forward reference searching to identify empirical papers describing doctors’ and stakeholders’ attitudes, beliefs and experiences of RPC. Papers were screened by abstract and title, and then by full text using inclusion and exclusion criteria. A data extraction tool was developed to record relevant information. Data were extracted to address the focus of the review.

Results:
The results will be presented as a descriptive summary and thematic analysis of the extracted data. The descriptive summary includes characteristics of the selected publications, types of study design, years of publication and countries related to the publications. The thematic analysis identified themes and gaps in the literature and will be reported as a narrative description of themes, a framework and tables summarising pertinent information. Themes identified by the scoping review include, for example, barriers and facilitators to doctors’ engagement in RPC, diverse and evolving RPC models and methods, professionalism versus regulation and summative as opposed to formative assessment. Gaps identified were the under-representativeness of the patient stakeholder perspective, the paucity of studies investigating the impact of RPC on lifelong learning and patient outcomes, lack of consensus about the definition and purpose of RPC.

Discussion:
Lifelong learning, particularly through the regulation of professional competence, is and will be an essential part of many doctors’ careers. Instilling the value of lifelong learning through RPC requires the implementation of sustained and robust mechanisms for delivery and assessment. The results of this scoping review offer essential information regarding doctors’ and other key stakeholders’ experiences, beliefs and attitudes of RPC that can inform best practice in this area and identify future areas of research.

References:
What are the support needs of healthcare innovators? An analysis of critical success factors and limiting factors.
K Leedham-Green, G. Reedy
KCL

Background:
To create a culture of sustainable, agile learning within a healthcare organisation or network, it is necessary to provide targeted support to healthcare innovators. There is a maturing literature on the range of factors that are reported to support healthcare innovations in becoming embedded and spread. There is however less evidence on limiting factors, or the factors that are critical to their success, due to a gap in the literature on struggling or unsuccessful innovations, or research that compares both successful and unsuccessful projects in a consistent way.

Methodology:
56 success factors across nine themes were identified from a review of the literature (1) and scoping interviews. A mixed methods survey was created, trialled and sent to 176 innovators from the Health Innovation Network of South London. Responses were received from 65 projects across six categories of success. Respondents rated the impact of each success factor in relation to their project and provided qualitative insights into each of the nine themes. They also rated a list of educational interventions targeting each of the nine themes, with space for additional comments.

Results:
Analysis of factor variance (Kruskal-Wallis 1-way ANOVA) across categories of success indicated eleven critical success factors with high certainty and a further six with moderate certainty. These were categorised into themes relating to expertise, leadership, organisational fit and structural support and a weaker theme relating to participation. There was an emergent theme amongst narratives of limiting factors relating to the difficulties navigating the boundaries and intersections between organisations, professions, sectors and cultures. We also list the factors that were non-critical (i.e. common across all categories of success) which include financial resourcing, team factors and the evidence-base for the intervention. Finally we present an analysis of the self-reported educational needs of innovators.

Discussion:
We are able to demonstrate which success factors differentiate, and which do not differentiate, between successful and unsuccessful projects in the context of the Health Innovation Network of South London. We also present a qualitative analysis of the limiting factors behind unsuccessful innovations. Our analysis of the drivers to these critical success factors and limiting factors provides targeted suggestions for healthcare educators who wish to enhance the culture of learning and innovation within their organisational context. Organisations should provide educational support to healthcare innovators that 1) provides networking and showcasing opportunities 2) targets expertise in leadership, implementation science and quality improvement 3) creates a dialogue between stakeholders (management, professionals, patients and innovators) so that projects have broad support. Structural change is also needed to 1) align organisational rewards with patient-level impact and value creation 2) address the interfaces between services and sectors.

References:
Collecting an evidence base to inform an undergraduate curriculum in Obstetrics & Gynaecology (O&G); the general practitioner’s viewpoint.

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University of Bristol

Background:
Our university is in the process of redesigning its entire undergraduate medical curriculum. There are many stakeholders in the medical curriculum, and ultimate outcomes are described by the General Medical Council in “Outcomes for Graduates.” (1) Whilst designing the curriculum for O&G, we recognise the importance of inspiring doctors to enter the specialty, but also wanted to utilise multiple sources to inform the curriculum in an evidence-based manner. The aim from the Department of Health is for 50% of UK graduates to enter General Practice, to meet the needs of the population and ease pressures on the primary and secondary care services. (2) A large proportion of GP consultations involve women’s health and we therefore feel that GPs are well placed to a) provide insight into the needs of a UK graduate, and b) teach undergraduates significant portions of O&G in the primary care setting.

Methodology:
Using the current university and Royal College of Obstetricians and Gynaecology curricula (3), we created a survey to ask GPs how important they felt different areas of women’s health were to their practice, and how confident they felt to teach these to undergraduates. The online survey was piloted anonymously to 10 GPs and we plan to now send this out to all of the GPs that teach undergraduates at our university.

Results:
60% of GPs felt that the most important part of the undergraduate curriculum should be gynaecological malignancies. Other topics that were scored as very important were abnormal vaginal bleeding, pelvic pain and benign vulval pathology. Topics perceived as less relevant were screening/booking in obstetrics and fertility. 70% of those surveyed had completed the DRCOG and the confidence of teaching across the range of topics was extremely varied.

Discussion:
Although at present we only have the pilot data, this survey has already highlighted some interesting thoughts for discussion around the curriculum. Currently, students spend almost equal amounts of clinical time in obstetrics (labour ward, antenatal clinic) as they do in gynaecology (theatre, clinics). Once we have the full data-set returned, it may help to inform the weighting of topics in the curriculum, perhaps leading us to focus on more gynaecology topics. It is interesting that our GP colleagues have focussed on the gynaecological malignancies and perhaps we need to add further teaching on this into our curriculum. This is just one part of a series of projects that we are running, in an attempt to inform a relevant, robust, evidence-based curriculum to ensure that our graduates have the knowledge, skills and attitudes required to provide excellent care for women, whichever area of medicine they enter.

References:
2 Department of Health. A High Quality Workforce NHS Next Stage Review 2008. 30 June 2008:15. 3
Curriculum Planning

Curriculum based simulation programme for Internal medical trainees
A Lillis, M Wilde
Surrey and Sussex Healthcare NHS Trust

Background:
Medical simulation has been found to enhance clinical competence at the undergraduate and postgraduate levels. (1) It can improve the quality and impact of training provided to doctors, now and in the future. (2) Internal medical training (IMT) is to replace core medical training in August 2019 and the new curriculum stipulates that human factors simulation must be included in training (3). Simulation training is well established for practical procedures for this group of trainees but not for human factors training (2) A report published by Health Education England in 2016 recommends some mandatory training in this area and 75% of Training Programme Directors for Core Medical Training felt this would be feasible. (2) The curriculum dictates that the focus in IMT year 1 is on the assessment of the acutely ill patient and the management of the acute medical intake of patients and IMT year 2 concentrates on experience in outpatient clinics. (3) We also needed to take into consideration the challenges in funding and staff training, which are associated with simulation (4). Taking all these points into consideration we elected to design a simulation program, which is curriculum based but also acknowledges these financial and faculty pressures.

Methodology:
The curriculum divides the learning objectives into two categories. The first being Capabilities in Practice (CiPs) and the second being a list of presentations and conditions of Internal medicine by system/speciality. The CiPs are further divided into six generic CiPs which are universal requirements described in the generic medical practices framework (5) and a further 8 specialist CiPs in Internal Medicine. We designed a simulation curriculum using a grid pattern to ensure all twenty-three systems or specialities were covered in some detail by the scenarios. We designed this on 24 scenarios, which aimed for the delivery of one scenario monthly for the two-year programme. We had the scenarios numbered 1 - 24 across the x-axis and the presentations down the y-axis, ensuring every system was covered. We then ensured that both inpatient and outpatient settings were simulated by colour coding the scenarios. Another column was placed at the end of the grid to ensure the scenarios covered a wide variety of both the generic and speciality CiPs. We also adapted the scenarios so the majority could be both high fidelity in the simulation suite but also low fidelity in a classroom with an actor to ensure it was feasible for most hospitals to deliver.

Results:
This has resulted in a collection of 24 scenarios of both high and low fidelity simulations, which are currently in varies stages of development. The scenarios are linked to the curriculum, and if used in their entirety cover a large proportion of the learning objectives for the internal medical trainees. By including low fidelity simulation options, we have made simulation more accessible when funding and staff training hamper its delivery.

Discussion:
Simulation is an excellent method of teaching for postgraduate medical trainees (1) By designing a simulation program around the curriculum we can ensure that the simulated scenarios are appropriate to the trainee’s learning needs and cover a wide section of the curriculum. Once completed, this could be packaged and used as a learning resource to enhance IMT training, focusing particularly on those topics deemed most important by the curriculum board.

References:
3) Joint Royal Colleges of Physicians Training Board. Curriculum for internal medicine Stage 1 Training. Royal College of physicians. 2018: 33-34, 37. Available at: https://www.jrcptb.org.uk/new-internal-medicine-curriculum

Board: C2
Evaluating the role of simulated 'on-calls' in transition to FY1 using thematic analysis of structured interviews and formal feedback

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Kings College Medical School London & East Kent Hospitals NHS University Foundation Trust

Background:
The transition to foundation year one (FY1) doctor can be a stressful period for medical students. Many feel they are poorly prepared to start practice [1]. Medical schools have a responsibility towards preparing graduates for FY1 to help reduce stress, improve patient care and increase confidence amongst the new cohort of doctors. The new King’s College London 2020 Curriculum introduced ‘Transition to FY1’; an 8-week module integrated into the final year of medical school aimed at increasing preparedness amongst medical students. It focused on an area of weakness identified by the National Student Survey 2016 [2]. Students participated in a series of workshops and facilitation groups to prepare for their FY1. The curriculum formally adopted simulated ‘on-calls’, allowing them to practice being ‘on-call’ in a safe environment [3].

Methodology:
Throughout the 8-week module, students participated in workshops on team working, stress and resilience, prescribing, clinical scenarios and shift working. The rest of the time was spent on the ward shadowing an FY1 doctor. Simulated in-situ ‘on-calls’ were run 1-2 times a week. They were designed to help prepare final year medical students for common ‘on-call’ scenarios. Students were each given a bleep and spent an hour ‘on-call’ sequentially dealing with the ward-based scenarios. They used mock sets of patient notes and drug charts left in carefully designated folders on the wards. Feedback was collected through questionnaires and structured interviews, both before and after the module. In addition, we also performed structured interviews after participants started their FY1 posts. Feedback and interviews underwent thematic analysis.

Results:
39 students took part in the module at William Harvey Hospital, Ashford. Questionnaires (n=30) and structured interviews (n=11) were used to collect pre- and post-course feedback. Overall the module achieved its aims, evidenced by candidates feeling more prepared when starting as an FY1. Many report using prioritisation and handover techniques learnt during the module in their day to day practice. Before the module, areas of concern identified by students via thematic analysis included: managing medical emergencies (40%), being on-call (20%) and meeting the organisational demands of the FY1 role (33%). Afterwards, they rated ward-based shadowing and simulated ‘on-calls’ as the most useful aspects of the module. Following the course, most students felt prepared for the organisational role, but still apprehensive about ‘on-calls’ (36%) and managing sick patients (43%). Interestingly, structured interviews revealed unrealistic expectations about ‘on-calls’. The comments from students include concerns regarding “attending a crash call and freezing” and the need to know detailed management plans of numerous medical emergencies. Interviews after starting FY1 suggested that their concerns were largely alleviated upon starting work and experiencing those situations. Following this they acknowledged that their concerns were eased by the availability of support from other team members and the limited frequency of true emergencies.

Discussion:
The fear of the first ‘on-call’ as a doctor is hard to prepare for. The theoretical knowledge, taught in medical school, does not always help students feel prepared for the practical aspects of their role. The transition to FY1 course was successful and appreciated by students for improving their preparedness. The simulated ‘on-calls’ were considered one of the most useful parts of the course by students and helped provide them with a realistic insight into the nature of being ‘on-call’. Their perceived concerns revolving around medical emergencies and ‘on-calls’ appear to be somewhat alleviated after starting work. Hence, increased exposure to ‘on-call’ scenarios both simulated and real is required to increase students’ familiarisation with the role of an FY1 ‘on-call’ and to help reduce their anxiety.

References:
Is Medical Education the Solution to the Primary Care Crisis?
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Background:
Primary Care (PC) is in an ongoing struggle with recruitment. Despite the aim to recruit 5000 new General Practitioners (GPs) by 2021, the number of working GPs has fallen1-3. Currently 19% of medical students list PC as their first career choice4 and 17% of foundation doctors went into GP training posts in 20155. As it is recommended that 50% of medical trainees should specialise in PC4,6, this crisis is very likely to continue. Negative perceptions of PC at undergraduate level are a major cause of this shortfall7. These perceptions are often due to poor experiences of GP teaching at medical school, and the influence of the hidden curriculum, as hospital doctors cast disparaging remarks of their GP colleagues7. The quantity of exposure to PC teaching at medical school has also been associated with future GP career choice6. While we are desperate to promote PC to medical students, exposure to PC in the undergraduate (UG) curriculum is limited to only 13%, which is unlikely to be enough to influence career choice4. The House of Commons Committee recognises medical education as a crucial tool to promote GP and has stated 'Those medical schools that do not adequately teach general practice as a subject, should be held to account by the General Medical Council'8. The reasons for insufficient quality and quantity of teaching are numerous: financial arrangements for undergraduate teaching, lack of support, and increasing service demands. While these may be hard to address, we seek alternative solutions to increase medical students’ exposure to PC. We tested a teaching program in the UG curriculum to try and positively promote PC.

Methodology:
In August 2018, a teaching program called ‘Neurology in Primary Care’ was developed to expose students to PC within their hospital based neuroscience module. Each week 6-10 students attend a tutorial. The students ‘role play’ taking a neurological history from a simulated patient, as though in PC. The scenarios focus on common headache and back pain complaints, often encountered in GP. The discussions then centre on management plans, as well as the referrals process, to introduce students to the primary and secondary care interface.

Results:
15 students attended the pilot sessions and then 83 students attended the formal teaching sessions (total n=98). Of those students who answered a questionnaire 93% (n=12) responded that the tutorials were useful and relevant to their learning needs, and would help them prepare for their future role as a doctor. In the traffic light and blank space feedback collected, no student gave negative feedback or suggestions for improvement, with 100% (n=31) leaving positive comments about the session.
Examples of positive feedback included:
- ‘By far the most helpful tutorial of the module’
- ‘So relevant clinically’
- ‘Interactive, relaxed, and felt like I learned key acute presentations in neurology’
- ‘Good to focus on neurological conditions from a GP perspective’
- ‘Really useful session, especially for progressing on to GP’

Discussion:
With GP recruitment in crisis and current exposure to PC UG teaching not sufficient to influence career choice, it is essential that we all play a role in promoting primary care, whatever our speciality. A simple teaching program introducing PC to a hospital based speciality has received excellent feedback from students on enjoyment, content, and PC exposure. We need to take this further by introducing more PC based tutorials into other specialities, and think of ways to reduce the negative impact of the hidden curriculum. This would significantly increase the quantity of PC teaching, thus aiming to increase future GP career choice. Medical education is certainly not the only solution to the primary care recruitment crisis, but perhaps it could be one solution.

References:
2. Limb, M. Still no “credible plan” to increase GP numbers, say MPs. BMJ. 2017, vol 357
Medical students' speciality preference relative to emotional intelligence and general self-efficacy
M El Boghdady, K Duffy, A Hassane, O Kouli, B Ward, BH Yap, A Crawford, CS Chai, JY Lim, N Makhdoom, BM Ewalds-Kvist
University of Dundee

Background:
Medical students’ specialty preference (SP) for future areas of expertise in the context of their profession was presently in focus of interest. We aimed to study if certain characteristics attracted the students to specific SP along with these characteristics’ association to emotional intelligence (EI), general self-efficacy (GSE). We also tested if medical students' EI and GSE were interchangeable measures.

Methodology:
A total of 93% out of 318 students completed questionnaires comprising 15 SP suggestions along with 26 hints, uncovering student’s underlying motives for SP. Also, Trait Emotional Intelligence Questionnaire-Short Form (1) and General Self-Efficacy Scale (2) were completed. Principal component analysis yielded 3 components: Work comfort (external stimulation), Specialty prospect (internal motivation) and Career opportunity (career drive). Groups of high-scoring students on EI (>155) and GSE (> 21) were computed separately.

Results:
Males prioritized surgical specialties (26%) as opposed to females, who ranked first general practice (13,7%). Females’ SP reflected internal motivation in “Specialty prospect” (p=.000) more so than males, whose SP reflected ambitions in “Career opportunities” (p .003); no gender difference was found in Work comfort. On EI, high-scoring males (M=168.88 [SD= 10.38]) out-performed high-scoring females (M=165.31 [SD= 9.32], p .034). High-scoring GSE males surpassed high-scoring females (p=.003); males did so also in the total sum of GSE scores. No gender difference was found in the total sum of EI scores. Specialty prospect and Career opportunity described students’ EI and GSE.

Discussion:
Females were more internally motivated as opposed to males, who were more career-driven than females in their choice of future area of expertise; the students’ underlying rationale for a certain specialty was thus disclosed. The characteristics that attracted the students to a specific SP and their association to student’s EI and GSE were also revealed. EI and GSE were uninterchangeable entities but are to be used as complementary measures.

References:
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Barts & The London School of Medicine & Dentistry, Queen Mary University London

Background:
Dental Nurse Apprenticeship programmes are being piloted as a new route to qualified status and one that seeks to address issues around preparing dental nurses to work in general dental practice settings. This study takes the form of a theoretically-driven evaluation of an apprenticeship programme being piloted across three London based Dental Schools. 34 apprentices were recruited to one of the 18-month training programme that (unusually) include 30 days in a primary care setting during the first 12 months. The evaluation was conducted towards the end of the first year. The key question guiding the evaluation was: in what ways and to what extent does the Dental Nurse Apprenticeship pilot offer an expansive apprenticeship? [1]

Methodology:
A considerable amount of research into the nature, value and impact of adult apprenticeships has been undertaken by Fuller and Unwin [2] who offer up a conceptual framework of apprenticeship ranging from restrictive to expansive, which is designed to be used as an analytic tool. In brief, an expansive apprenticeship is one where ‘Apprentices are given the opportunity to acquire skills and knowledge that will help them progress in their occupation and provide a platform for further education and career development’. Fuller et al 2015:71 We recruited 11 DN Apprentices, 4 Dental School Tutors and 4 Dental Care Professionals from Primary Care to take part in the evaluation. In-depth individual and focus group interviews were conducted, recorded and transcribed. The expansive-restrictive framework was used as a heuristic device to identify features of the apprenticeship which were experienced as more or less expansive.

Results:
Analysis is ongoing. Our preliminary findings suggest that the DN apprenticeship pilots have a number of features of an expansive apprenticeship, particularly for those who wish to pursue careers within secondary care settings. Time spent in primary care settings is broadly welcomed by apprentices, but rather than prime them to work in general dental practice, it mainly confirms their desire to work in a hospital setting.

Discussion:
The expansive-restrictive framework has considerable utility as a tool to evaluate Dental Nurse Apprenticeships. We will discuss the ways in which it shaped our approach to data collection and analysis.

References:
Stakeholder perspectives on undergraduate medical education: a systems approach (exploring purpose to better understand interests in curriculum composition)

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Background:
The increasing volume of things to learn is one of the challenges presently threatening to overwhelm undergraduate medical students(1, 2). Educators feel pressure to streamline courses(3), yet a challenge remains to ensure that medical education reflects the "evolving knowledge and ideas of contemporary practice, whilst meeting the ever-changing needs and expectations of society"(4). Fulfilling these requirements must be balanced against the risks presented by a swelling curriculum that might endanger student welfare and threaten the reliable supply of trained junior Doctors that society needs. A range of diverse stakeholder interests would ideally be accommodated(5) and, whilst a number of stakeholders are formally recognised(6), past studies have failed to identify them with sufficient breadth or to explore their understanding of the system and their views relating to curricula composition.

Methodology:
This exploratory qualitative study aimed to draw on elements of systems thinking to better understand the stakeholders in undergraduate medical education. Eighteen participants from across the stakeholder-base were interviewed using semi-structured techniques. Elements of Soft Systems Methodology(7) were applied when their perspectives were sought on the purpose of the education, along with their ideal weightings for subjects in a curriculum (using the QAA’s benchmark standards for curricula(8) as a template for discussion). Thematic analysis was conducted on transcripts and systems thinking approaches applied (including modelling using Systems Dynamics(9)).

Results:
Findings suggest that the number of stakeholders could substantially exceed the modest list provided by the General Medical Council. The purposes of the education were themed into safe patient care, social benefit, service provision, student benefit and provider benefit. There was a distribution of perspectives seen across the themes but safe patient care emerged as a universally-shared purpose. Curricula priorities were also diverse, with competing interests favouring different subjects for emphasis in the curriculum, notably with views on the value of science particularly divided.

Discussion:
Emergent themes highlighted tension between students’ educational needs and the Trust’s service demands, creating situations which threaten the long-term systemic viability of medical education. Systems mapping explores the nested structures of medical schools (within Universities but based in Trusts). Influence in curriculum composition was modelled and missing feedback from patients and supervising Doctors was identified. This study suggests that more learning is required in this challenging area with research focusing on the practicalities of a wider stakeholder engagement strategy. A deeper understanding of views on purpose would be beneficial to mitigate present tensions, as would a thorough exploration of feedback processes.

References:
Student Evaluation: Improving Online Response Rates
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Background:
Student feedback is an important aspect of the evaluation process [1]. Questionnaires are commonly used to obtain student feedback [2]. They allow for both qualitative and quantitative data collection [3, 4]. However, questionnaires are not without limitations. High non-response rates can negatively impact on both the quality and reliability of data [5]. Within our education department, there was a recent transition from paper to online questionnaires; the motivation being both administrative and environmental. This transition resulted in a reduction in overall response rates. This effect has been demonstrated in several studies. Avery et al demonstrated a statistically significant reduction in response rate between paper (72.9 %) and online (48.5%) evaluations [6]. This reduction in response rate can result in a misrepresentation of the student population, thereby introducing non-response bias into the data [7]. Within our education department we regularly review and adapt teaching sessions based on student evaluation. This requires both good quality and reliable data. We aim to explore the impact of different interventions on student response rates for online questionnaires. This will be conducted during the medical school final year ‘Acute Block’ rotation

Methodology:
The ‘Acute Block’ is a 6-week clinical rotation for final year medical students which comprises of 12 teaching sessions. Each clinical rotation has 17 - 22 students ‘Google Forms’ was utilised to create online questionnaires for student feedback on each of the teaching sessions. Hyperlinks to these questionnaires were disseminated to the students via the cohort’s ‘WhatsApp’ group, thereby allowing the students to complete the questionnaires on their mobile phones. The control group received a single hyperlink after the teaching sessions. We then trialled new interventions for each rotation. The student attendance for each teaching session was recorded, to remove the effect of student absence on the overall response rate. Intervention 1: A weekly reminder for the students to complete the online questionnaires was sent via the ‘WhatsApp’ group every Friday. The reminder included all the necessary hyperlinks. Intervention 2: The hyperlink was provided prior to the teaching session in addition to the weekly reminder. The teacher was also instructed to encourage the students to complete the online questionnaire at the end of the session. The overall response rates were compared to assess the impact of each intervention. The data was analysed using the unpaired 2-tailed t-test to assess if there was a statistically significant difference between the control and the intervention groups

Results:
Preliminary results have demonstrated that the mean response rate for the control group was 24.6%. Higher response rates were observed for both the intervention 1 group (35.7%) and intervention 2 group (47.8%). The unpaired t-test analysis demonstrated no significant difference between the control group and intervention 1 group (p=0.064) but a statistically significant difference was noted between the control group and intervention 2 group (p=0.0005). Further analysis of the response rate between the two intervention groups demonstrated no significant difference (p=0.081)

Discussion:
There is evidence that online questionnaires result in reduced response rates when compared to paper questionnaires [6]. However online questionnaires have some advantages, such as environmental benefits and reduction in administrative time and costs. This study has demonstrated that simple interventions such as providing the hyperlink prior to the teaching session in addition to weekly reminders can significantly improve response rates. This should encourage other education departments to explore the use of online questionnaires and to trial novel approaches to encourage student engagement. Further data collection is currently ongoing, and we aim to explore additional interventions, such as the impact of incentivising feedback

References:
1. Arreola RA. Developing a comprehensive faculty evaluation system: A handbook for college faculty and administrators on designing and operating a comprehensive faculty evaluation system. Anker Publishing Company, Inc., 176 Ballville Road, PO Box 249, Bolton, MA 01740-0249; 2000.
Curriculum Planning

Transition from traditional to integrated medical curriculum: faculty’s perspective
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Background:
The medical educationists around the world are emphasizing upon the need for enhancing quality of basic medical education aimed towards improved healthcare for everyone (1). Since the Flexner report, the predominant model of curriculum has remained traditional comprising of first two years of basic science courses followed by clinical teaching (2). The shift from traditional to integrated curriculum is being attempted over a few decades, albeit repeatedly, leading to changes in small increments, however, without any meaningful/effective transformation. This resulting cycle of “change without difference” is exhaustive and needs to be explored in order to bring forward a plan that could break the trend of “recommending but not effecting integration (3). Although enough literature addresses students’ perceptions, very few studies tackle the way faculty perceives integrated curriculum (4). Scarce incentive for faculty, insufficient chances of interaction between basic and clinical teachers, failure of administration in providing suitable turf (5) and resistance shown by some basic department heads have all been documented. This study was planned to explore the faculty’s perceptions regarding factors influencing practical transition from traditional to integrated medical curriculum at the outset and a few years after the process.

Methodology:
This qualitative phenomenology study was conducted at two undergraduate medical colleges; one where integrated curriculum was at the outset and the second running it successfully. 12 semi-structured interviews (6 from each college) were recorded and transcribed. Thematic content analysis was carried out and faculty’s perceptions about factors affecting practical transition to integrated curriculum were explored at two stages, i.e., at the outset and after its implementation.

Results:
Four themes emerged as supporting factors; ownership of the program, faculty training and sensitization, adequate resources and prior and continued planning. Four impediments identified at the outset were deemed genuine by faculty who had gone through the experience including, faculty’s resistance, lack of training, lack of incentives, and insufficient resources. Four more impediments were identified after the experience which include lack of leadership, lack of attention to faculty’s concerns, lack of communication and difficulties in setting appropriate assessment.

Discussion:
The four themes of supporting factors for integrated curriculum are backed by evidence. They are likely to effect the educational change at all three stages of Fullan’s model(6), i.e., initiation, implementation and continuation intended to be explored through the conceptual framework of the study. Among the four themes, the ownership of the program sits at the top, as the support of higher-ups is essential for providing resources and impetus for faculty development,(7) as well as the vision to plan, execute, evaluate and modify, i.e., creating a suitable culture (8) While narrating the success story of nine years, a participant from College-B said, “When the Principal or administration wants to transition to the integrated, anything can happen.” In conclusion, this study has identified several factors; supporting as well as impeding, that can affect the smooth and sustainable transition to integrated undergraduate medical curriculum from faculty’s perspective at initiation, implementation and continuation stages of educational change. The factors identified by both colleges are likely to have affect (positive and/or negative; depending upon the type of factor) on smooth transition (initiation and implementation), while those identified by the faculty of College-B after their experience of running the integrated curriculum for several years are likely to have bearing on sustainability of the program (continuation). This reflects the evolution of program over time.

References:
Utilising clinical admission data to inform medical school curriculum design: A novel approach to evidence-based curricula.

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Background:
The optimal design for undergraduate medical curricula has been debated for centuries. Current medical schools must provide students with the knowledge, skills and attitudes to transition into the Foundation Programme. Across the UK the approach to this varies widely, with the GMC mandating the final learning outcomes in “Outcomes for Graduates (1).” The Department of Health aims for 50% of UK graduates to enter General Practice, with a large number of consultations per year involving women’s health (2). Currently, the Bristol Medical School curriculum mandates students attend 6 gynaecology outpatient clinics and 4 half gynaecology theatre days with acute gynaecology learning limited to 2 half day ward or on call shifts in gynaecology. Our University is moving towards a case-based learning curriculum, and while planning the new course, we considered what should be included within a new Obstetrics & Gynaecology (O&G) curriculum. From a social accountability standpoint, we wanted to assess whether the current curriculum content meets the future health needs of society, especially as time spent as an undergraduate in O&G may be the only O&G experience before entering GP training (3).

Methodology:
Anonymised data was collected on gynaecology ward admissions and those attending the ward-based gynaecology emergency clinic (GEC) between 20/08/2018 and 21/09/18 at St. Michael’s Hospital, University Hospitals Bristol NHS Foundation Trust, Bristol, UK, a University teaching hospital and tertiary referral centre. Data collected included; the source of referral, presenting complaint, primary care information, investigations, diagnosis and outcome. Diagnoses data were analysed for all patients with an additional subgroup analysis of those referred to GEC. Groups comprised: early pregnancy and post-partum problems, post-operative infections, vulval and vaginal pathologies, gynaecological abdominal pathologies, non-gynaecological diagnoses and other pathologies.

Results:
101 acute admissions were recorded for gynaecology. 35.6% (n=36) were referred from primary care with a diverse range of presenting complaints. Of these, only 5 (n=36, 13.89%) had a documented pelvic examination performed in primary care. Pathologies rarely seen in the outpatient setting such as retained products of conception and endometritis (9.9%), post-operative infections (14.85%) and Bartholin’s abscesses (7.92%) accounted for a significant proportion of diagnoses. Subgroup analysis of GEC data, showed a similar range and proportion of pathologies to that observed in acute gynaecological ward admissions.

Discussion:
Through the learning opportunities in gynaecology within the current curriculum, learners will not necessarily observe the most frequent gynaecological presentations reported in this study. GEC provides a unique, regular educational opportunity for acute gynaecological training for medical students and junior doctors. As such, it should be considered an integral part of the Bristol medical student curriculum. It allows exposure to a range of post-operative and surgical pathologies such as wound infections, relevant across surgical and medical curricula. The lack of documented pelvic examinations performed in primary care emphasises the importance of the educational opportunities for this examination during O&G rotations. This project demonstrates a novel approach of utilising clinical admission data to inform an evidence-based weighting of topics within undergraduate medical curricula. Evidence presented here will aid the development of the MB21 curriculum being developed at Bristol Medical School. This project will be combined with other curriculum-focused projects to inform the full O&G curriculum to ensure a robust, evidence-based learning platform for future doctors in women’s health.

References:
Worm’s eye view versus bird’s eye view: tackling curriculum transformation from a student’s perspective
A Kaneria, E Keeling, A Romito
Imperial College London

Background:
The Lee Kong Chian (LKC) School of Medicine in Singapore is a partnership between Nanyang Technological University, Singapore (NTU Singapore) and Imperial College London (Imperial) with the first cohort of students graduating in 2018. LKC employs an innovative flipped classroom approach utilising Team-based Learning (TBL). Students engage with the essential learning materials prior to a TBL session. Their preparation and readiness is evaluated with Single-best answer questions, followed by team application exercises in which they apply knowledge. We undertook a collaborative in-depth review of the Years 1 and 2 curriculums to ensure student learning experience was optimum, good curriculum coverage and all materials are up-to-date and accurate.

Methodology:
The curriculum review team reviewed four main aspects: intended learning outcomes (ILOs), learning materials, the TBL sessions and student feedback. All materials were reviewed as presented to students via their virtual learning environment. The ILOs were analysed for language, structure, clarity and granularity and how well they represented the learning event. Learning materials were analysed for content, sequence and how well they align with ILOs. These were collated alongside formative readiness assessment data from TBL sessions and student feedback from previous years. Lastly, focus groups were run with student representatives to discuss feedback in detail. All data was discussed with the course lead and the curriculum review team. All materials were reviewed and discussed before the renewal process began.

Results:
The review demonstrated the majority of materials were of good quality and student feedback was mostly positive. We identified numerous minor discrepancies within the materials and learning outcomes indicating curricular creep. Additionally, the narrative of the curriculum was difficult for students and faculty to follow, making it difficult for students to see how they would progress through the curriculum and where the links between subjects are. The curriculum structure was altered by adding hierarchy of ILOs, changes to course and module structure and a narrative description of each module added. We also identified unused space in the curriculum which was reassigned.

Discussion:
Continuous curriculum review is essential to ensure it remains relevant and up-to-date with technology advances, leaps in knowledge and societal shifts in diseases. Simply adding materials to an already full curriculum is unfeasible [1]. Additionally, student and teacher expectations change as new ways of learning and delivery are adopted and the curriculum must be flexible towards this [2]. By encompassing a holistic review that covered four components of learning: content, approach, assessment and evaluation [3] our review was able to inform about student experience beyond simple acquisition of knowledge and skills. Learning is rarely linear, yet most evaluation models employ a reductionist viewpoint where processes are cause and effect. For example: the supply of appropriate learning materials should result in adequate competence. These models do not evaluate the complex interactions undertaken during the student journey, but our multi-dimensional view does. The curriculum review generated new data, in addition to utilising existing data [4] including TBL assessment scores, student generated questions and feedback. These highlighted concepts which challenged the students and allowed for correlation with content. The triangulation of data within a single matrix [1, 5] gave the curriculum team and the module leads an accurate overview of the review findings and highlighted areas of concern. In summary, this review recognises that the curriculum is not merely the sum of its parts [6] and by conducting the review from the student perspective we considered both session-level detail and the ‘bigger picture’ by introducing changes with wider impact.

References:
Faculty perspectives on a new online simulation platform: the Airway to Exposure Series
R Hayhurst, R Hasan, A Sheikh, H Mottershead, A Rehman
NHS Dudley

Background:
Simulation is a valuable learning tool which incorporates application of knowledge, practical skills and collaborative practice within a safe environment [1]. The main limitation of simulation is that it is resource intensive in terms of faculty, time and costs [2]. Here we evaluate an online platform to support simulation teaching. The Airway to Exposure (A to E) Series is a collection of clinical scenarios of acutely unwell patients. Students are required to demonstrate their knowledge of an A to E approach by working through the cases. This involves multiple choice questions to make assessment and management decisions and free text questions to construct handovers and prescriptions.

Methodology:
We aim to collect simulation faculty perspectives regarding the value of our simulation tool in developing skills such as A to E assessment, prescribing and handover. This feedback will be collected using a questionnaire and a focus group amongst faculty regularly involved in final year student simulation teaching.

Results:
Evaluation of faculty perspectives will allow us to gain insight into the potential role of this online tool in enhancing students' learning. In particular we will gather opinions as to whether the series could enhance the learning during simulation and consolidation of this learning.

Discussion:
Online tools such as the airway to exposure series are less resource intensive and can be revisited by students at any time to consolidate their learning in simulation. This could enhance learning during valuable simulation time by allowing prioritisation of non-technical skills, which are difficult to address with alternative teaching modalities.

References:
An Exploratory Study of Career Inflection Points at Four Institutions
G Beck Dallaghan, N Gollehon, D Balmer, B Richards, N Borges, A Gill, J Mehta, M Vo
University of North Carolina School of Medicine

Background:
A career in academic medicine is a competitive process, involving multiple decision points, some of which can have profound personal and professional implications (1). Medical students typically anticipate a straightforward career trajectory, but in actuality, academic physicians construct and adapt their careers over time. We (the research team) conducted an exploratory study to investigate career inflection points (CIPs), defined as events that fundamentally influence or alter career trajectories (1). We used the Career Construction Theory (CCT) (2,3) as one of several interpretive lenses to characterize how individuals adapt to their careers. According to CCT, career construction involves four dimensions, each representing a general adaptive response: (a) sensing concern about ones future career, (b) increasing personal control, (c) displaying curiosity, and (d) gaining confidence to take action.

Methodology:
We conducted and recorded semi-structured interviews with a convenience sample of six academic pediatricians at four institutions (n=24). The interviewer began by asking participants to reflect on CIPs for 3-5-minutes, then verbally describe those CIPs to the interviewer. The interviewer probed for more information about CIPs, e.g., the impact of intrinsic and extrinsic factors pertinent to each CIP. Institutional leads coded their interviews using a codebook that the entire research team had iteratively developed and refined. Given the chosen interpretive lens, we focused on codes related to CCT: concern, control, curiosity, and confidence.

Results:
On average, participants describe 4-6 CIPs spanning pre-medicine to post-residency. The frequency with which each CCT dimension occurred varied by participant and by the institution. Nevertheless, participants expressed a sense of Control more frequently than Concern; they expressed Curiosity and Confidence considerably less frequently than Control or Concern. Participants expressed a sense of Control when they made personal decisions that conflicted with the advice from others ("The division chief said, why are you wasting your time doing that and I said because I like to and I had to make something of my time"). They expressed Concern about actual and anticipated career challenges ("I can’t work in this kind of environment… I thought about it, and realized I really liked kids with pulmonary hypertension even though they were scary"). They expressed Curiosity by exploring future outcomes ("I’m pretty sure that I’m gonna end up subspecializing…because of my interest in… pathophysiology, and really asking the why questions"). They expressed Confidence when they were aware of their innate and acquired abilities ("on NICU, I was kind of like, oh, my God, they nitpick every little number. But then I - actually, I got good at it ").

Discussion:
Our study provides insight into the influence of control, concern, curiosity, and confidence on the career trajectories of academic pediatricians. With the increasing competitiveness in academic medicine (4), it is not surprising that interviewees often recalled CIPs involving Control. Because CIPs capture defining moments in ones’ career trajectory, we believe that the results of our exploratory study shed light on the “why” behind trainee’s career decisions and warrants further investigation beyond pediatrics. Our interest in CIPs stems from a desire to help trainees adapt and construct careers that align with their talents, interests, and life-style preferences, even if that means straying from a singular career trajectory (2,3). We believe that doing so, will reduce the risk of burnout and/or career dissatisfaction. Building on our results identifying patterns of adaptive responses, we plan to develop tools to assist learners and career advisors optimize career decisions, especially those that result in CIPs. These tools may be adapted for use across the education continuum by medical students or residents as they explore career options as they arise.

References:

Board: D2
Faculty Development

Educator Development: Small Group and Lecture Teaching Skills for Consultants and Speciality Doctors.
R Parikh, N James, N Patel
The Pennine Acute NHS Trust

Background:
Small group teaching (SGT) and lectures are delivered by hospital consultants and speciality doctors across the continuum of medical education. SGT promotes communication and team-working skills and can be used to develop practical skills, reasoning and problem solving (1). Lectures can inspire, communicate key concepts and summarise up-to-date information (2). As part of the Pennine Acute Trust’s ‘Medical Educator Development Programme’, we devised a workshop for consultants and speciality doctors to develop key SGT and lecturing skills.

Methodology:
A 90-minute workshop was devised. The first section focused on SGT: strengths were explored before participants were asked to reflect on the conditions/rules that make SGT most effective. Participants reflected on topics they found difficult to teach and worked with others to devise new approaches. The “flipped classroom” was explored (3), and participants how to promote active learning and team exercises. Lecture skills were developed through considering how to give a ‘terrible’ one! Slide clarity, design and presentation skills were reviewed. Participants considered how to alter lecture materials and “check” learning. Participants were invited to complete a qualitative questionnaire examining their learning from each section of the workshop.

Results:
40 questionnaires were returned from two workshops. Strengths of SGT: participants noted the ability to gauge knowledge and “pitch” material accordingly. Additionally, an ability to ‘check understanding’ of concepts (and their application) as well as the development of confidence was appreciated. Conditions: tutors felt preparation was vital. The need to demonstrate relevance to curricular objectives and clinical practice were crucial to engagement and could be designed-in. Appropriate pace, flexibility, and the ability to adapt to learners’ needs were important but the need to “stick to topic” was vital. Rules: encouraging learners to generate rules such as “respecting the views of others”, “punctuality” and avoiding distractions (such as mobile phones) were important for group performance. Difficult topics: the need to “break-up” topics and show clinical relevance were highlighted. Subjects including blood-borne virus testing or child development, were areas where participants reported they would try a flipped classroom approach. “Boring” subjects required a fresh approach where clinical relevance was stressed through interactive exercises and media. Flipped classroom: tutors understood the utility of providing factual material to be built upon in SGT sessions. An example was “weight loss in a baby”, where pre-session material was allied to a list of interactive cases. Lectures: slide clarity and an increased use of pictures and media were key changes. Allied to this, tutors considered structure, amount of content, clinical relevance and colour-blindness when creating graphs. Encouraging questions and polling were techniques to “check” learning. Attendees felt the workshop was relevant to their needs as trainers. The session was felt to have “reinvigorated” teaching these methods and focused on “important aspects from a trainee’s point of view”.

Discussion:
Presenting material well in either SGT or lectures is important. Key themes emerged from the workshop: appropriately “pitched” material, clinical relevance and a need to check understanding. Activities to develop the teaching “faculty” are important to maximise the educational benefit to the learner and satisfaction in the tutors. We advocate offering such a programme to build engagement, enjoyment and utility. Mobile phones were viewed as a distraction. We are planning to adapt the session to consider how mobile devices can be used productively.

References:

Board: D3
How effectively are we training our teachers to teach clinical reasoning?
S Khin-Htun, J Hickman, I Glover
Nottingham University Hospitals NHS Trust

Background:
Clinical reasoning (CR) is an ability to think, reason and make decisions in a context dependent clinical scenario but its intuitive component can be a challenge to teach in formal education settings. However, there is increasing focus on the importance of formally teaching CR to future clinicians in order to deliver enhanced and quality health care (1) (2). The aim of this research is to develop an effective faulty training programme to train clinical teachers how to teach CR; specifically, to assess the learning needs of the clinical educators and develop a training programme based on this.

Methodology:
In the initial phase, eight Teaching Fellows (TF) and one Nurse Educator (NE) were interviewed to explore their understanding of CR and their current application of it within their teaching. The interviews were analysed to identify key themes, allowing for the subsequent development of three half day workshops. Fourteen teachers attended workshop One, which focussed on an introduction to the principles of CR. Workshop Two explored literature recommendations and constraints on teaching, with 30 participants. Workshop Three covered different learning theories and applications, 20 teachers attended this workshop. Questionnaires using a variety of qualitative, semi-structured questions and ranking scales were collected in order to evaluate the effectiveness of these interventions in helping to teach clinical reasoning.

Results:
Results from the initial learning needs analysis revealed that more than half reported that CR is currently not explicitly taught. Although the general consensus was it should be taught, the teachers were unsure how or when to deliver this teaching. A common theme was at what time CR teaching should be delivered; without domain specific knowledge it is difficult to implement CR. It was established that a clear programme on how to teach CR was required. Another constraint was poor knowledge of teaching methods and tools that could be used. In the post course evaluation 100% ranked the workshops as useful or very useful on the Likert scale. The workshops were described as a great learning experience, with fantastic resources and credible tutors. The teachers felt that learning about the educational theories and tools for clinical education was particularly valuable, inspiring new ideas for teaching CR. It was suggested that further courses could be used to explore how teaching CR could be implemented in busy clinical environments and individualising scenarios.

Discussion:
This research highlights the necessity for specific training programmes on teaching CR; the learning needs analysis demonstrated the lack of knowledge in how to deliver CR teaching and massive variation between teaching sites. The intangible nature of CR made it difficult to teach in formal settings and many of the teachers were at a loss of how to teach CR, what setting is best to teach CR in, and when. Learning theories were covered in the workshops attended and following this feedback showed participants felt much more knowledgeable in teaching methods. Further workshops then enabled participants to explore teaching CR in real-time and how to tackle difficulties they come across. This study demonstrates the benefits of developing a shared syllabus with key vocabulary enabling consistency between sites. As with previous research we found a dual benefit from our interventions; TFs and NEs felt having learnt how to teach CR would change their practice as both clinicians and educators (3). In conclusion the educational techniques proven to aid CR are well developed but the lack of faculty expertise in teaching CR remains a significant barrier (4). Therefore this faculty development programme will enable us to train our clinical teachers to effectively and explicitly teach CR; allowing us to develop the next generation of fully competent health care professionals.

References:
Increasing tutor skills in narrative-based teaching methods: outcomes from a teaching intervention

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Background:
The use of arts in medical education is becoming more widespread in the UK at both undergraduate and postgraduate levels. Medical student engagement with arts subjects in a structured manner has been reported to increase empathy, professionalism and coping strategies for work-related stress. However, as this topic is unfamiliar to most clinical tutors, they are understandably cautious to use arts in their teaching methods. Resultantly, there is considerable disparity between teaching aspiration and delivery with this method.

Methodology:
We report on the influence of an educational session to introduce clinical tutors to the use of arts to teach students core topics in primary care such as communication, ethics, illness behaviour, mental health, addiction and palliative care including use of certain tools and techniques as well as looking at approaches to improving students’ Emotional Intelligence. Resources used as source materials included works of visual art, fiction and poetry. Methods of teaching included narrative-based exercises and workshop on narrative topics relevant to medical education, as well as a discussion of relevant learning outcomes.

Results:
Two tutor workshops were delivered to 21 tutors in total, of which 14 (67% response rate) provided feedback by an online questionnaire. Tutors rated the usefulness of the workshop as 4.4 out of 5. Many qualitative positive comments were received on how engaging the session was and how tutors had developed a direction and tools for incorporation arts into their future teaching sessions.

Discussion:
The small group of tutors who attended the educational session were self-selected and therefore had some prior interest in the topic. Face to face educational sessions can help to develop tutor skills, enthusiasm and willingness to incorporate arts resources in their delivery of teaching primary care core topics. Further work is needed to determine whether upskilling and promoting enthusiasm has a tangible impact on the use of this method. This small-scale project has demonstrated that tutor training has a positive impact on clinical tutors’ willingness, empowerment and enthusiasm to use arts-based teaching resources to deliver core topics in primary care.

Board: DS
The Case for Faculty Development
D Proctor, K Mattick, D Leeder
University of Exeter Medical School

Background:
This project is inspired by the idea that investing in staff, in any line of work, is likely to lead to benefits of some kind. In a university-based medical school, these benefits might take the form of a better education for students. However, at present it is unclear how the benefits from faculty development come about and decisions about investments typically have little basis in evidence. This research relates to an important question within medical education: ‘How can faculty development be deployed optimally to support educators to provide the best possible quality medical education?’.

Methodology:
This study involves three phases: a rapid review of the literature (Phase 1), which will be used within realist interviews with key stakeholders (Phase 2), to underpin a series of recommendations about faculty development (Phase 3). The study is informed by realist theoretical perspectives, given the focus on mechanisms that may lead to certain outcomes in certain contexts.(1)

Results:
Data collection is ongoing at the present time, however upon conclusion of the project (July 2019), the following objectives will have been achieved: 1. To map out the range of possible mechanisms by which investing in faculty development within medical education might result in better learner outcomes, though a rapid review of the literature 2. To explore these mechanisms in more depth and tease out which of these mechanisms are likely to be most important in which circumstances, through realist interviews with key stakeholders 3. To make recommendations about investment in faculty development, to support decision-making by key individuals and institutions.

Discussion:
The discussion and conclusions of the project will focus on which forms of faculty development are most beneficial for which individuals under which specific circumstances. As mentioned, data collection is ongoing so it is not possible to be more specific at this time. However, this study does not seek to address questions of effectiveness but rather explores the range of mechanisms by which positive outcomes might be achieved in different faculty development settings. We argue that different mechanisms operate in different situations, and that sometimes multiple mechanisms are operating concurrently.

References:
The design of a regional educational network to support professional development of clinical teaching fellows
A Chu, C Morton, C Pye, L Ghani, SF Smith
Imperial College London

Background:
Clinical teaching fellows (CTFs) are playing an increasingly vital educational role in the UK and commonly consist of a 1 to 2 year fellowship linked to a hospital or university. Fellowships are aimed at junior doctors interested in medical education and may involve teaching, simulation, educational research and curriculum development. CTFs require support for their professional development as early career medical educators; we evaluated how creating a regional network could benefit participants by promoting social collaboration and engagement in a community of practice.

Methodology:
As CTFs, we established a network with the aim of promoting peer support across hospital teaching sites. CTFs were surveyed and highlighted educational needs as: career guidance, opportunity to listen to others and access to senior educators. Our network was developed to meet the professional development needs of CTFs by coordinating educational activities including (i) induction (ii) monthly network meetings (iii) regular newsletter (iv) online platforms and (v) a handover process.

Results:
Engagement with the CTF network came from a regular group of 10-15 participants. 30 CTFs attended the first induction programme. Five faculty members consistently contributed to the network. An evaluation survey was sent to 57 CTFs and 12 (21%) responded. CTFs ranked (i) peer learning (ii) access to experts and (iii) career guidance/structure as the top benefits of the network. CTF meetings and the newsletter were identified as the most useful educational activities. Some respondents also identified organising network events as useful for their portfolios.

Discussion:
The network was evaluated and found to be of positive value to participants. Structured educational activities gave CTFs beneficial opportunities for peer learning, access to experts and career guidance. The network has continued over four years and has adapted to the needs of each cohort. Most recently, educational workshops by university faculty offer CTFs a tailored programme for accreditation with the Academy of Medical Educators. This case study offers a framework for other regions or institutions to support the professional development of CTFs as early career educators.

Board: D7
The impact of clinical teaching fellowships on the professional development of junior doctors
J Fox, L Wynn-Lawrence, K Leeds-Ham-Green, A Chu
Imperial College London

Background:
Clinical Teaching Fellowships (CTFs) are designed for junior doctors to dedicate time to teaching without the competing interests of service provision. The number of these posts in the UK has risen dramatically over the last decade and it is increasingly recognised that CTFs are a valuable resource for faculty and students (1). Job descriptions are diverse, with variation in specialty focus, clinical commitments, research opportunities and involvement in curriculum development (2). Anecdotal evidence suggests that CTFs provide a valuable experience for the professional development of junior doctors. Teaching is recognised as a core skill for junior doctors and these jobs allow committed individuals to improve as clinical educators and establish special areas of interest. This includes the development of advanced educational, research and leadership skills as well as opportunities for their CVs such as presentations and abstracts (3). The aim of this study is to evaluate the educational opportunities provided for CTFs during their roles as medical educators. These may be in the form of formal educational qualifications, experiential learning from involvement in student education or extracurricular opportunities afforded by time out of clinical training.

Methodology:
For this evaluative study we are sending an online questionnaire to current and previous CTFs associated with Imperial College London (n=190). This will be done via an email distribution list of known CTFs from 2014-2019. The survey is currently being piloted amongst a sample group and once refined will be distributed in February 2019. Quantitative and qualitative data will be collected, allowing for both statistical analysis and categorical analysis of free-text data. Thematic analysis will provide an early narrative approach for discussion.

Results:
The results will generate demographic data to reflect the CTF cohort by grade, specialty and post length. It will explore the journeys of CTFs before, during and after their posts. This will include: motivations for applying and prior experience; opportunities during the fellowship including educational research and qualifications; impact of CTFs on subsequent career development. The impact on professional development as both clinicians and educators will be addressed.

Discussion:
At our institution, CTFs play an integral and innovative role in the undergraduate curriculum. Many of these individuals will form the foundation of future education departments and academic institutions alongside their clinical roles. CTFs offer significant opportunities to enhance the professional development of junior doctors whilst providing a valuable resource for education faculties. We can use the experiences of both past and current CTFs to identify improvements for educational opportunities and possible innovations for local implementation. Enhancing the experience and outcomes of CTFs will provide a sustainable and innovative contribution to the future workforce.

References:
The ward is a classroom: Use of Ward Based Educational Guardians to bridge the undergraduate and postgraduate education divide
C van't Hoff, G Zubikarai, A Notghi, A Stanton, A Kerry,
Great Western Hospital

Background:
The ward based educational guardian (WBEG) is a novel role extending the traditional role of the clinical teaching fellow. Its aim is to support both undergraduate and post-graduate medical education whilst being based in the clinical environment. The WBEGs split their working weeks between clinical duties and medical education of medical students and postgraduate trainees. We aim to evaluate the effect of the WBEGs on the clinical performance indicators and educational outcomes.

Methodology:
Using an electronic survey, we sought the opinions of medical education and clinical staff, along with students working with WBEGs. We also observed for the impact on training and service delivery, by assessment of: staffing levels, exception reporting, cancellation of clinics (a particularly relevant aspect given the new internal medicine curriculum), trainees attending their mandatory teaching and feedback submitted to the GMC survey by trainees. Furthermore, we examined the effect on the ward and patients, using ‘percentage of discharge summaries completed within twenty-four hours’ as a surrogate measure of enhanced productivity.

Results:
Preliminary results show the addition of the WBEG role is valuable particularly in undergraduate medical education; with students particularly finding the continuity of a familiar face in the clinical environment, and knowing someone is focussed on education as beneficial. Clinical teaching fellows report addition support (particularly in simulation) beneficial. Staffing levels on the Respiratory ward improved and the number of clinics cancelled reduced over the 4 months there were WBEGs on the ward compared to the same time period last year. However, despite improved staffing levels, the proportion of discharge summaries completed within 24 hours has actually decreased across the same time period; the exact cause of this remains under further investigation. Additionally, when teaching attendance for Foundation Year 1 trainees was analysed there was an overall decline from 90.5% attendance in 2017/2018 to 31.5% in 2018/2019 on the Respiratory ward where 2 WBEGs were employed. Both figures take into consideration an average of 39% of teaching sessions missed due to on-call commitments such as a nights and annual leave. This trend was not isolated to the respiratory department but is seen throughout the hospital with an 84.6% average attendance over the year 2017/2018 decrease to 32.8% for the first 4 months of 2018/2019. Further results regarding the effect of WBEGs on the GMC survey are currently pending.

Discussion:
Initial results regarding the WBEGs work have been positive, particularly in relation to undergraduate education in the clinical environment, simulation and supporting both the clinical teaching fellows and the clinical staff on the wards. The effect of the WBEGs on post-graduate education appears to be more diverse; however, work is ongoing (in particular with projects around post-graduate simulation). Evaluating the efficacy of a new job role is challenging, particularly as the WBEG role is multi-faceted. Given this, it may be difficult to prove causation with our results, however we aim to continue to collect data throughout the rest of this year and hope show that the addition of WBEGs has benefitted the trust overall. Further areas of development would include expanding the WBEG team across the hospital to raise awareness, allowing them to support a greater number of educational opportunities.
Long-term impact of the Primary Trauma Care course in the Kongo Central province of the Democratic Republic of Congo

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Background:
Trauma constitutes a significant and growing burden of disease.[1] Trauma care remains rudimentary in low and middle-income countries (LMICs) and developing trauma services remains a low priority due to persisting notions of trauma as a costly, inefficient and resource-intensive specialty.[2,3] One effective and inexpensive approach to improving trauma care is education. Whilst education alone is unlikely to reduce mortality rates in settings without effective pre-hospital and emergency care systems, trauma training represents an important first step in improving access to trauma care. The two-day Primary Trauma Care (PTC) course covers the management of severely ill patients and takes into account the resource constraints experienced in LMICs.[4] PTC is an alternative to the expensive Advance Trauma Life Support (ATLS) course used in high-income countries.[4] Unlike ATLS, there are no studies on the long-term impact of PTC on knowledge, which would inform the timing of refresher courses, or attitudes, which may impact whether trauma services are developed locally.[5,6] The Kongo Central province in the Democratic Republic of Congo (DRC) has a particularly high burden of road traffic incidents due to the main route that runs from two port towns to the capital. The PTC course was introduced as part of a series of interventions to improve trauma care in Kongo Central. The aim of this study was to evaluate the impact of PTC on the long-term knowledge, confidence and attitudes of healthcare workers in DRC.

Methodology:
A retrospective cohort study was carried out comparing multiple-choice questionnaire (MCQ) and confidence matrix results of PTC attendees prior to the course, immediately after and at the time of follow up at either 12, 16 or 24 months. A semi-structured questionnaire was administered at follow up exploring the effect of PTC on four key areas of trauma learning; knowledge, skills, attitudes and relationships.[5] Differences in participants’ MCQ and confidence scores over time were compared with the dependent t-test and Wilcoxon rank sum test, whereas differences between groups were compared using one-way ANOVA and the Kruskal-Wallis test. Data analysis was completed using STATA (Statacorp, TX).

Results:
A total of 51 participants (63.8%) responded. Participants were predominantly male (71.2%) with a mean age of 41.6 years. There was an increase of 4.8 (95% CI 3.8-5.8, p<0.01) in MCQ scores and an increase in confidence scores (p<0.01) post-PTC. Compared to post-course, MCQ scores did not decline after 24 months (p>0.01) whereas confidence scores decreased at 12 months (p=0.03). Most (61.0%) had used basic airway manoeuvres since PTC whereas only 16.9% had performed a more invasive procedure by inserting a chest drain. A total of 61% reported that equipment has not been available for procedures and 88.2% felt more could be done to better manage injured patients. All participants believe trauma services are important and 84.7% felt PTC made a positive impact to the care of patients. Some participants became instructors for PTC, which is now an entirely locally run training course.

Discussion:
This study has not demonstrated significant knowledge attrition over 24 months post-course, suggesting there is no need for a refresher course within two years post-PTC. The finding is in contrast to ATLS studies, which found a significant decline in knowledge after two years.[7] Longer-term follow up is required to establish the right time for a refresher PTC course. Encouragingly, participants had put their acquired skills into use and felt that PTC had resulted in better care for patients. However, participants felt that their environment was not conducive to good trauma care, as equipment was not available and they felt improvements to trauma care were needed in their hospitals. Ultimately, the positive views of the participants regarding the importance of trauma and PTC may promote the acceptance and development of trauma services in their region.

References:

Board: E2
'Sink or Swim?' results. Considerations for International Medical Elective projects at the University of Aberdeen.

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Background:
International Medical Electives (IMEs) are popular, and form an integral part of the global health curriculum[1]. Forty percent undertake their IME within resource-constrained settings[2], however there is a need for greater reciprocity and collaboration between local and host institutions to ensure mutual benefit[3][4]. Uniquely within the University of Aberdeen (UoA), all students are required to undertake a project during their elective. Project proposals are submitted 7-14 months prior and an interview undertaken to ascertain project viability and ethical approval. In line with Medical Schools Council guidelines[5], we used a mixed methods study (‘Sink or Swim?’) to evaluate the experience of IMEs from the perspective of students and their host supervisors.

Methodology:
Final year MBChB students undertaking an IME between January and May 2018 were invited to complete a pre-IME questionnaire, a reflective diary, and participate in a post-IME focus group. Host supervisors were invited to complete an online questionnaire. Quantitative questionnaire data was analysed descriptively. Reflective diary and focus group transcripts were reviewed independently to identify emergent themes.

Results:
Nine students and five host supervisors participated in the study. Most students were female, undergraduates and identified as ‘white British’. All students were UK residents and under 30 years of age. Five students undertook an IME in a low or middle-income country (LMIC). All students had conducted an audit or research project prior to their IME. Not all who required ethical approval had received training in research ethics, and the responsibility for guaranteeing approval appeared left to students. Most students did not undertake an IME in an institution with a long-term partnership with the UoA and 2/3rds were unable to contact their host supervisor before arrival. All students, and host supervisors and from LMIC would have preferred better prior communication, particularly to facilitate project planning. Most students self-proposed a project or in collaboration with their UK-based electives supervisor. Some host supervisors expressed a preference for greater involvement in the project design, and there was often a need for students to change their project plans upon arrival. Although most host supervisors would prefer a long-term elective partnership with the UoA, students preferred organising their IME independently. Students found data collection in a different environment challenging, and students visiting LMIC required greater administrative support. Some host supervisors had a different perspective from students regarding the project, which created conflict between host and student in some LMIC settings. Most students did not complete their report in the 8-week elective, leaving some students unsure how it would be received by their host. Both students and hosts were divided regarding the benefits of conducting a project. Students who could see that their project was valued by their host felt a great sense of achievement. All host supervisors found the project of interest and most felt it was of use to their department. Students who did not consider the project beneficial, were also those who faced difficulties collaborating with their host supervisor.

Discussion:
Effective communication to allow collaboration was valued but not achieved by the majority, and uncertainties existed in the acquisition of ethical approval. Data collection within unfamiliar systems resulted in a greater administrative burden for LMIC host institutions. Value from the projects undertaken appeared dependent upon mutual benefit and engagement. In addition, conducting a project brought some students in conflict with their LMIC host. Although numbers within this study are small, the importance of mutuality in research conducted whilst on IME is concordant with the literature, and important considerations for future practice have been highlighted.

References:
An innovative model of interprofessional education to improve staff confidence, competence and communication on a gastroenterology ward in a UK district general hospital

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Homerton University Hospital NHS Foundation Trust

Background:
There is a consensus that healthcare professionals should work in teams to provide safer and higher quality care in varied health settings. However, team training in education programs lags behind the actual practice of working in teams. We have introduced an innovative model of interprofessional education on a gastroenterology ward at Homerton University Hospital NHS Foundation Trust, United Kingdom (UK). The purpose of this model is to improve self-reported clinical confidence and competence of staff and to promote multidisciplinary communication.

Methodology:
There are five phases of the education model. In phase one (1), reflective sessions were conducted for all ward nurses with an aim to develop a better understanding of the concept and to incorporate reflection into everyday clinical practice. Questionnaires pre and post-session were distributed. In phase two (2), once-monthly medical teaching sessions were organised for junior doctors and nurses over a one year period (December 2017- November 2018). Announced thirty-minute sessions included twenty-minute teaching time and ten minutes for reflection and feedback. In phase three (3), a staff survey was conducted in June 2018, mid-way through the medical teachings to assess confidence in skills gained through attendance at these sessions. In phase four (4), five-minute poster reading sessions were introduced for nurses. These sessions were conducted once a week in the afternoon safety meeting over a five-month period (August 2018- December 2018). The theme of the poster was derived from preceding month's medical teaching session and was replicated for the entire month in order to disseminate core knowledge to a wider group of nurses. Qualitative semi-structured interviews were conducted to assess the quality of these sessions in phase five (5).

Results:
(1) Reflective sessions were arranged for 85% of the ward nurses (n=14 nurses). Pre and post-session questionnaires demonstrated good understanding of reflection and all nurses agreed that it enhanced thinking and analytical skills. (2) Eleven medical teaching sessions were conducted over one year period (December 2017- November 2018). The total number of attendees was 79, 42% were doctors and 38% were nurses. The average number of participants per session was 7. Reflection was undertaken by 82% and feedback collected from 89% of attendees. All staff agreed that the sessions made them more confident in the management of particular cases. The majority also agreed that these sessions would change their practice. (3) Staff survey results at six months (mid-way) were gathered from 36% of staff that had attended one or more of the teaching sessions. Junior doctors rotate four-monthly; unfortunately feedback was not collected from the first group of participating doctors. Shift patterns made it difficult to survey all nurses. Additionally, a quarter of the nurses attending the sessions were agency staff. However, feedback was collected from the majority of the regular nurses and some doctors. All agreed that they have been more confident in applying the skills taught and that the sessions promoted multidisciplinary communication. (4) The total number of Poster reading sessions was 18 over five-month period (August 2018- December 2018). (5) Semi-structured interviews were conducted after five months of running the Poster reading sessions. All nurses agreed that the sessions enhanced confidence and clinical skills. There were mixed views over time constraints inherent within clinical practice and some expressed a preference for more dedicated study days.

Discussion:
Implementing an interprofessional education model within a clinical area is challenging due to busy clinical commitments. However, the sessions have provided staff with an efficient way of learning within a clinical environment. These sessions improve self-reported confidence and clinical skills and promote multi-disciplinary communication.

References:
An Introduction to Human Factors: A novel approach to interprofessional simulation training for undergraduates.
H Welch, P Jalota, T Wallbridge, K Siau, J Pepper
Walsall Healthcare Trust, UK

Background:
There is an ever-growing understanding that adverse events within healthcare often stem from deficiencies in human factors. It is therefore essential that students studying to become healthcare professionals graduate with an awareness of the impact of these non-technical skills on patient safety. A key aspect in the success of human factors lies in interprofessional collaborative working yet UK medical and nursing students often have very little formal interaction during their undergraduate education. We aim to demonstrate that high-fidelity simulation training is an effective method in illustrating the influence of human factors on patient outcomes in a risk-free interprofessional setting.

Methodology:
A group of final year medical and nursing students were recruited to our simulation workshops. Two high-fidelity simulation scenarios were designed to allow participants to display a number of non-technical skills including teamwork, leadership, communication, decision making and situational awareness. Between the two scenarios, a formal debrief and seminar offered the students the chance to analyse and reflect upon the interactions they had observed. Both medical and nursing facilitators were present throughout the sessions. Qualitative data was collected through self-reported confidence scales and quantitative data was collected via a short quiz on human factors. Questions were set to challenge students’ knowledge of individual non-technical skills and their understanding of how these relate to clinical practice. Data was gathered pre- and post-intervention.

Results:
21 final year medical and nursing students participated in the workshops. A good base-line understanding of human factors was seen with an average pre-intervention quiz score of 72.3% which increased to 77.3% post-intervention. Trauma calls, previous simulation training and ward-based emergencies were cited as students’ prior experience of human factors in action. Only 14.3% had received any formal training in human factors. 100% of participants reported that they understood the impact of human factors post-intervention. Following the intervention, all students understood the role and importance of situational awareness compared to 66.7% pre-intervention. After the workshop 100% of students felt confident in their abilities to raise concerns in a team environment with an increase of 31.8% compared to before the workshop. All participants found the training session useful and relevant to their undergraduate studies.

Discussion:
The overwhelmingly positive feedback and self-reported increase in understanding of human factors suggests that simulation training is an effective tool for demonstrating the impact of non-technical skills on patient outcomes to undergraduate students. The controlled simulation setting is the perfect learning environment for students to challenge and develop these skills without risk to patients or themselves. Our interprofessional approach enabled students to directly participate or observe good multidisciplinary communication and teamwork. As results both professional groups had a greater working knowledge of the roles of their colleagues Overall, this teaching method can better prepare final year medical and nursing students for real-life clinical practice.
Inter-Professional Education

Emergency Department Education - Shifts apart but learning together - A year’s experience of an asynchronous multidisciplinary online learning forum

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Background:
Staff within an Emergency Department work shift patterns, often making it difficult to get people physically together for education. Free and Open Access Medical Education (FOAM) is a recently developed online learning modality within Emergency Medicine (1,2) for all clinical staff groups (3). Navigating this rich online environment can however be daunting for those with little experience. We wanted to encourage our staff to become more involved. However, concerns have been expressed about FOAM content with anybody being able to add to it, with a perceived lack of transparency or scrutiny (4). The quality of this material is however improved by faculty oversight (2). Social media provides an asynchronous online learning environment and a social community of practice which has been shown to be a fertile ground for learning (5). This allows no pressure for immediate interaction and allows more reflection and improves engagement (5). We present our reflections on a year’s experience of using this innovative online learning environment for clinical staff within the Emergency Department at The Great Western Hospital in Swindon.

Methodology:
We formed a senior departmental faculty to create their own, curate existing and to signpost staff to topical and relevant material within their scope of practice. Delivery was via an asynchronous online education forum using a closed Facebook group with regular posts and subsequent reactions and interactions with this material made available for all Emergency Department clinical staff. Faculty vetted material from external sources, moderating contents and comments if necessary. Posts included blogs, papers, safety briefs, infographics, podcasts and interactive cases. After one year of experience and development we then analysed patterns of behaviour of using the forum and invited participants to take a structured survey.

Results:
Membership was accelerated by faculty adding members but since then numbers have gradually increased organically by word of mouth. We have 170 regular clinical staff and 150 members of the forum with more than 100 active members when material is posted. Initial posts were mainly by faculty however this is now increasing amongst members. About 20 % of members actively post or comment, with interactive cases proving most popular, and the other members are passively interacting with the material. 22% of members were surveyed. The resource is used by a wide range of clinical staff and age groups. The resource is used asynchronously with people choosing how often they review or interact with the material with no pressure to contribute. It was a liked resource with an average satisfaction score of 7.7/10. Views from participants highlighted the benefits of a joint education space for a diverse group of clinical staff but also some of the challenges in delivering such a learning environment.

Discussion:
Creation of an asynchronous online education forum allows teams who work shift patterns to learn together. Using the faculty to vet and moderate material helps to maintain credibility and ensures quality learning for members. Users can interact with the material in their own way and learn at their own pace with no pressure to contribute increasing sustainability. This has brought about a culture of open educational discussion both on and offline. There are challenges but also rewards for a department in delivering multidisciplinary education in this manner.

References:
(1) Nickson C., Cadogan M. Free open access medical education (FOAM) for the emergency physician. EMA (2014) 26:76-83
Teaching from the outside: experiences of non-medically qualified clinical teachers of undergraduate medical students

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Background:
The concept of clinical teaching has undergone much iteration over the course of time, as well as across professional and disciplinary boundaries. In recent years, the number of non-medically trained teachers of undergraduate medical students has risen sharply (1, 2), yet there have been few studies to investigate the views and experiences of these non-medical teachers.

Methodology:
Semi-structured interviews were conducted with thirteen clinical teachers involved in the delivery of the FoCP rotation (delivered during year three of the MBBS programme). An inductive approach based on a social constructivist philosophy was adopted, and thematic analysis used to identify emergent themes from participants.

Results:
Differences in professional background were associated with different experiences of clinical teaching and how participants identified as teachers. Clinical teachers from non-medical backgrounds (such as nursing or others where they had never been a medical student themselves) found the transition from clinician to teacher of medical students more challenging than their medically trained colleagues. This challenge was even greater for teachers from a non-graduate (in this case health care assistant) background, who had to become familiar with both the medical programme and the role of a doctor alongside developing a teacher identity. An additional challenge for all teachers who were not medically trained was that their colleagues may not understand their scope of practice and expertise, which led in some cases to teachers either being asked to operate outside of their scope or else not be utilised to their full ability. Lack of respect or perceived ‘lower status’ was experienced by some non-medical participants from students and colleagues, as was an associated lack of confidence in teaching ability. Career pathways for clinical teachers were unclear, and suitable career role models were not easily identified or available in many cases.

Discussion:
Participants from non-medical professional backgrounds described some characteristics and clinical teaching experiences that differed from those of their medically qualified counterparts in terms of role structure, perceived isolation and issues of confidence and capability. Confidence and capability were expressed as being important for clinical teachers themselves (in relation to their own abilities) and from colleagues. Lack of perceived opportunities for career progression of non-medical teachers was evident in the findings, although it was unclear from the data whether this was a true reflection of available progression opportunities, or whether the lack of career role models (due to the small number of such teachers in the region) meant that these participants were simply not aware of pathways open to them. This is a potential concern, as clinicians motivated to become involved in clinical teaching may become discouraged if the opportunities for progression in a teaching role are not comparable with those offered by clinical posts. Non-medical teachers expressed a desire to become more involved with the university and attend networking events to both establish new collaborative working relationships and raise awareness of the role and capabilities of non-medically trained clinical teachers. In order to achieve this, these teachers would need the opportunity to present work to their medical counterparts and have separate opportunities to meet with other non-medical teachers from the wider regional medical school and beyond. Organisations involved in medical education should seek to provide opportunities for non-medically trained teachers to identify similar colleagues to engage in professional development and to promote their role and expertise.

References:
Use of Case Based Simulation to deliver Undergraduate Inter-Professional Education across Community and Hospital Care Settings
S McCaughey, J Angus, M Al-Talib, S Jones
University Hospital of North Tees

Background:
Inter-professional Education (IPE) includes joint learning by students of more than one profession to enhance collaborative practice (Barr, 2001). If IPE is delivered poorly, it can subsequently have a negative effect on future engagement in IPE (Thistlethwaite, 2018). We have previously delivered IPE, opportunistically, within small groups on the ward attachments for third year medical students and allied healthcare students (Christopher, 2018). This delivery method had major limitations including inadequate representation of other health care professionals and was only hospital based. We sought to utilise Case-based learning (CBL) methodology (Williams, 2005) as a framework to deliver an IPE session which would include multiple health care professional students and emphasise the importance of their individual roles in patient journeys between community and hospital settings. This study evaluated the effectiveness and acceptability of this teaching strategy to both facilitators and learners. Prior to the session, generic learning outcomes were determined by the facilitators and the learners were also asked to state their own learning outcomes. Achievement of these learning outcomes was ascertained to gauge whether learning had occurred.

Methodology:
A team of allied healthcare professionals from five different disciplines delivered a simulated paper based case which encompassed post partum sepsis, complex family dynamics, learning disability, mental health issues and stroke. This ensured that all learner specialities were incorporated into the case. A half day session was organised outside the hospital and learners worked through the case in groups of 5-10 (maximum 50% medical students) and 2 facilitators of different specialities. The case was designed to highlight each aspect of the patient journey from home to hospital and back; including investigations and treatment, emphasising the role of each health care professional at every stage. Learners and facilitators completed evaluations pre and post session. Thematic analysis was used to analyse free text comments to gauge attitudes and learning achieved. Likert scales were used to evaluate delivery and acceptability. Prior experience of IPE was also ascertained and both learners and facilitators asked to compare with previous sessions. RIPLS (Parsell and Bligh 1999) was not used as psychometric testing was beyond the scope of this study. RIPLS also has major limitations when assessing efficacy of IPE (Mahler et al 2015).

Results:
100 students were invited. 78 attended. 68 (87.2%) completed a pre-session questionnaire and 77 (98.7%) completed a post-session questionnaire. Facilitators included 5 nurses, 1 midwife, 1 pharmacist, 1 physiotherapist and 3 doctors. Learners were from 8 different disciplines; medical (47%), nursing (12%), midwifery (8%), biomedical science (8%), paramedic (6%), physiotherapy (6%), radiography (6%), physician associate (4%) and pharmacy (3%). Prior to the session learners wanted to gain understanding of each others’ roles, improve communication and team-working. After the session, the free text analysis showed that this learning had been achieved. Post session evaluation of delivery was extremely positive; learners felt involved, that the facilitation helped learning and they had learnt something new whilst achieving their objectives. Learners who had prior IPE experience rated the session highly. Free text comments emphasised the value of CBL as a method to deliver this session.

Discussion:
Use of facilitated CBL which encompasses community and in hospital care appears to be an effective method to deliver IPE to undergraduates from a wide range of disciplines. This study is an improvement of previous delivery methods we have used and will form the basis of further IPE sessions within our healthcare trust. It was acceptable to the facilitators and learners alike. Further analysis of knowledge retention by learners will be undertaken at a later date.

References:
"Who are they?: survey of medical student attitudes towards physician associates before and after joint teaching sessions
A Beverstock, C Lewis, S Rowlands, K Sales, A Kelly, M Fenton-Jones
University Hospitals Bristol NHS Foundation Trust

Background:
Physician associates (PAs) are an increasingly large part of the UK workforce: in 2017 there were 450 PAs and 1200 PA students in the UK[1]. There has been much research regarding attitudes to PAs among qualified physicians which show broadly positive attitudes to the role[2], but little research has been done on how UK medical students feel about physician associates. The only previous study showed a lack of awareness of the role amongst medical students[3]. With the number of practising PAs increasing it is increasingly likely that junior doctors and PAs will work alongside each other in the future. This study was carried out to find out the attitudes of medical students towards their potential future colleagues before and after joint teaching session.

Methodology:
Twenty-five 4th year medical students were surveyed on their attitudes towards and understanding of the role of PAs. These medical students and the PA students, all on their paediatrics block, then received two joint teaching sessions that involved working through paediatric cases in medicine and orthopaedics. The students were put into mixed groups of medical students and PAs during the sessions and asked to work through cases as a team. 17 students attended one or more of these sessions. The medical students were then asked again about their understanding of the role of PAs and whether their attitude had changed as a result of the joint teaching. They were asked whether they would feel comfortable working alongside physician associates in the future.

Results:
Before teaching: None of the medical students had received joint teaching with PA students before. 7 students (28%) had no understanding of the role of PAs. Only 2 students (8%) rated themselves as having a ‘good understanding’ of the role of PAs. The rest (24 students, 72%) had only ‘some understanding’. Prior to the teaching session the majority (16 students, 64%) had a neutral attitude to PAs. There was an almost even split of positive (4 students, 16%) and negative (5 students, 20%) opinions on the role of PAs. Two students expressed concern about having to compete for clinical opportunities with PA students. Only one of the five students with a negative opinion of PAs reported any previous exposure to the role. Of the four students with a positive opinion of physician associates, all reported interaction with PAs in previous placements. After joint teaching: Four students were re-surveyed who did not attend the joint teaching: 2 had ‘no understanding’ of the role of PAs and 2 had ‘some understanding’. Of the 17 students who did attend the joint teaching, 4 students (24%) had a good or excellent understanding of the role of PAs, and only 3 students (17%) had no understanding of their role, an improvement from before the sessions. 10 of the students (58%) held a positive view PAs, up from 16% before the teaching. Only 2 students (12%) held a negative view. The remaining 5 students (30%) held a neutral view of PAs. Of the 4 students re-surveyed who did not attend the joint teaching, all held a neutral view. All 21 students said that they would feel comfortable working alongside physician associates in the future.

Discussion:
Contrary to the previous work on the subject, which suggested that joint teaching did not improve understanding of the role of PAs[3], our study showed that joint teaching between medical students and PA students improves the understanding and attitude of medical students towards PAs. Medical students who have previously encountered PAs in clinical practice hold a more positive view towards them than those who have not. Exposure to PAs improves the attitude of medical students towards them. Medical student understanding of the role of PAs is poor, and most students have had limited exposure to PAs in clinical settings. Medical schools may wish to consider delivering joint teaching sessions in future in order to educate medical students about the role of their future colleagues and to improve medical team cohesion.

References:
Patients and Doctors as Partners in Learning: Foundation Year 2 Doctors' perceptions of patients as teachers
M Fenton-Jones, A Kyriakou-Haniche, R Aspinall, T Watkin
University Hospitals Bristol NHS Foundation Trust

Background:
Collaborative working is essential to allow health professionals to diagnose and treat patients, but increasingly the relationship is synergistic. There is some evidence to suggest that shared decision making improves adherence to treatment regimens, reduces costs to the National Health Service (NHS) and may reduce the likelihood of litigation (1). The General Medical Council (GMC) recognises the importance of doctors to work in partnership with patients, including listening to and responding to their concerns and preferences (2). Furthermore, the United Kingdom Foundation Programme (UKFP) Syllabus advises Foundation Year 2 Doctors (FY2) should encourage patients to make informed decisions, recognise patients’ expertise and help them to acquire knowledge of their condition (3). With this in mind, a teaching session at University Hospitals NHS Foundation Trust for FY2 Doctors regarding ‘Patients and Doctors as Partners in Learning’ was started in 2016. Now in its fourth year, this study aims to assess the perceptions of FY2s regarding patients as teachers, and their role in post graduate medical education.

Methodology:
A 2 hour teaching session is being provided to the 42 FY2 Doctors working at University Hospitals Bristol NHS Foundation Trust in January 2019. Seven patients have been invited to attend the session by the Trusts’ Patient and Public Involvement Lead. The patients will be split into 3 groups of 2 patients and 1 group of 1 patient. FY2 Doctors will be split into smaller groups and rotate around each patient group. Each patient group will focus on a specific theme:

1. Advantages and disadvantages of improving the partnership between doctors and patients to the patient
2. Advantages and disadvantages of improving the partnership between doctors and patients to the clinicians
3. Advantages and disadvantages of improving the partnership between doctors and patients to the public

Ways to increase patient involvement in their treatment The session will culminate in the FY2s creating a poster on each of these themes and presenting these to all attendees. A feedback questionnaire will then be collected assessing the FY2 Doctor’s perceptions of patients as teachers; including enjoyment, impact on personal development, learning, usefulness and implications for practice.

Results:
The teaching session is due to take place on Wednesday 23rd January 2019, after which results will be analysed.

Discussion:
This study demonstrates the increasing importance of patients in medical education as highlighted by the GMC and UKFP. Whilst results are outstanding, we hope this study will add to the ever-growing evidence base regarding using patients as teachers, from the perspective of some of the more Junior Doctors working in the NHS.

References:
Working with Voluntary and Community Organisations to enable student research projects
R Farrington, C Kang, L Tomkow
University of Manchester

Background:
People seeking asylum and new refugees are sometimes excluded from research involving the patient voice. The reasons are multifactorial and include language barriers, a lack of knowledge, access, and support around research processes. Many are fearful of the consequences of 'speaking out', having had bad experiences in their home countries. By developing relationships with Voluntary and Community Organisations (VCO) we were able to facilitate a deeper level of engagement with a group infrequently heard. Medical students often feel their projects have limited purpose and wish they could do more to make a difference. Informing plans for care for a disadvantaged group fits well with maintaining their altruism.

Methodology:
Qualitative research was considered the best method of capturing the experiences of asylum seekers and refugees access to healthcare. A GP senior clinical lecturer and medical student used local VCO contacts to establish the priorities for developing a research question. In collaboration we built an ethics case which was accepted by our university which included safe and effective means of recruitment, communication and consent for participants. Word of mouth is a particularly important method of information dissemination for this group. 18 individual interviews took place in venues familiar and acceptable to ASR with the support of the VCO staff. Professional interpreters were used. Interviews were recorded, transcribed and analysed. A third researcher with an advocacy background joined us for the analysis and to help write a paper.

Results:
A good range of participants from several countries with a variety of reasons for migration were able to share their experiences of accessing healthcare since arrival in the UK. The strong relationships with VCOs was fundamental to the process. Rich data was collected from a group who may otherwise have remained silent. Preliminary discussions have taken place at regional NHS planning meetings pending full results becoming available in a paper that has been accepted for publication in the British Journal of General Practice. This will inform the national discussion on provision of appropriate care.

Discussion:
Without the support of the VCO community it would have been very challenging to access the participant group we wished to study. Their role was key in helping potential participants to understand the processes, especially around anonymity. They were able to provide venues and pre and post interview support to participants. They helped the researchers understand the wider context of the issues discussed and the potential vulnerabilities of the interviewees. Medical students providing VCOs with data from their projects see tangible outcomes, helping with evaluation and funding bids, giving a sense of purpose to their research. The student was able to understand the value of developing networks in the local community and the proactive work they undertake. In disseminating this scholarly work we are raising the issues internationally as well as locally and are promoting the Social Responsibility agenda of our institution. We recommend building networks with local VCOs to enable collaboration on mutually beneficial research projects undertaken by medical students.
Assessing the extent to which reflective practice promotes learning from paediatric prescribing errors amongst postgraduate medical trainees
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University Of Liverpool

Background:
Reflection is a critical learning tool and an essential component of UK medical training, mandated by the GMC (1). Reflective practice has been incorporated as a requirement of most undergraduate and postgraduate training schemes, usually in the form of written e-portfolio entries. Although the theoretical benefits of reflection are well described (2), previous work has demonstrated poor engagement amongst trainee doctors, especially in relation to formal reports of clinical incidents (3). Anecdotal evidence suggests that this reluctance to reflect may be compounded by the fear of negative repercussions, with high profile cases such as that of Hadiza Bawa-Garba adding to this anxiety (3,4). Prescribing errors are a recognised cause of morbidity and mortality within paediatric inpatient settings (5). At Alder Hey Children’s Hospital, trainee doctors who are involved in a prescribing error are invited to complete an optional reflective proforma. Authentic reflection should enable clinicians to evaluate their performance by identifying factors which contribute to these mistakes as well as potential areas for improvement. This study has two principle aims: (1) to determine the extent of engagement with optional reflective practice amongst postgraduate medical trainees, and (2) to assess the quality of these reflective accounts.

Methodology:
Ethical approval for this retrospective study has been sought from the University of Liverpool. The reflective proforma is a local document which has been adapted from Gibbs’ reflective cycle and comprises several mutual domains, including description of the event and subsequent emotional impact, drawing of conclusions and formulation of an action plan (6). During a two year period (January 2017 to December 2018), 37 reflective pieces regarding prescribing errors were submitted. Planned analysis uses a graded quality rubric (Scale 0 to 6), first published by Learman, Autry and O’Sullivan (7). Proformas will be independently scored by two investigators who compare agreement.

Results:
The number of proformas returned will be mapped to the number of prescribing errors, enabling identification of trends and discussion around circumstances which influence engagement with reflection. The data will be examined for correlations between quality of reflection and factors such as trainee grade. Examination of scores will also allow for analysis of any common deficiencies in reflective practice which could inform further development of the proforma.

Discussion:
Although reflection is widely implemented within postgraduate medical training, quality and engagement is variable (3,7). Determining the extent and nature of these issues will enable development of targeted interventions to improve upon the practical application of the reflective process. The study investigators welcome collaboration with interested parties.

References:
Assessing the Mental Wellbeing of doctors at Gloucestershire NHS Trust - Introducing the use of a Mental Wellbeing Scale for Junior Doctors during Clinical and Educational Supervisor meetings

M Fahy
Gloucestershire NHS Trust

Background:
The working lives of junior doctors in the UK are subject to significant pressures and challenges, a study by the Royal College of Physicians in 2016 reported that 61% of junior doctors felt their mental health was adversely affected by their job sometimes or often¹. In line with this UK based doctors have higher levels of substance misuse and suicide than the general population and significantly higher than other professions, such as solicitors². Many doctors struggle to raise concerns about their mental well-being over fears of being stigmatised and are often ill informed of how to seek help for personal or professional difficulties. Clinical and Educational Supervisors meetings are an important part of junior doctors training and form a key part of monitoring how a trainee is developing in their clinical work, and potentially represent a significant opportunity to identify if a trainee is experiencing any sign of deterioration in their mental wellbeing. The Medical Education team at Gloucestershire NHS trust have developed a Mental Wellbeing screening tool, based on research by the Residents Doctors of Canada³. It is a tool to encourage self-reflection and identification of problems developing with mental health, the user rates themselves as either well, stressed, becoming unwell or unwell. It contains detailed information on the next steps to take for help. Since August 2018 Clinical and Educational Supervisors have been encouraged to ask trainees about their mental wellbeing and advised to use the Mental Wellbeing Scale during trainee meetings as a way of identifying potential problems trainees may be experiencing.

Methodology:
The study aims to assess the levels of use of the Mental Wellbeing Scale amongst junior doctors during their Clinical and Educational Supervisor meetings. The Mental Wellbeing Scale was sent out to all junior doctors and supervisors, copies were also placed strategically around the hospital. Two Separate questionnaires were sent out to junior doctors and Clinical/Educational Supervisors within the trust in December 2018, requiring the recipient to rate the use and utility of the Mental Wellbeing Scale.

Results:
39 Consultant Clinical and Educational Supervisors responded to the questionnaires and 33 junior doctors. 86.8% of junior doctors felt it would be ‘potentially useful’ or ‘very useful’, to discuss mental wellbeing during supervisor meetings. However, 81.1% of junior doctors reported not being asked about mental wellbeing during their meetings. Most junior doctors had seen the Mental Wellbeing Scale, but only 23.1% reported having used it. Approximately 50% of Supervisors were aware of the Mental Wellbeing Scale. 81.3% report that they routinely ask trainees about their mental health during meetings, with 22.2% using the Mental Wellbeing scale too do so. 78.8% felt the Mental Wellbeing Scale could be useful tool to open conversations regarding mental health.

Discussion:
Both junior doctors and supervisors identified that discussions regarding mental health are important and that supervisor meetings are potentially a useful time to address these issues. Junior doctors felt that it was helpful if the consultant brought up the topic and if it formed a compulsory part of the meeting. A potential mismatch exists between the proportion of supervisors who reported that they were inquiring about mental wellbeing and junior doctors who felt they were being asked, this may indicate a communication breakdown and the use of a standardised approach using the Mental Wellbeing Scale may prove beneficial. Further education is required to inform both junior doctors and supervisors on the availability of this tool and its use in supervisor meetings. Further reassurance is required to ensure junior doctors are aware that these conversations are confidential and are not recorded on the electronic supervisor reports.

References:
1) Royal College of Physicians. Being a junior doctor. Experiences from the front line of the NHS. December 2016
Can Surgical Bootcamps Be Used As An Effective Tool in Vascular Surgery
N Slim, M Okocha, T Walker, R Winterborn
North Bristol NHS Trust

Background:
An international crisis is developing within vascular surgery - a shortage of surgeons (1-3). Vascular surgery is poorly taught in medical schools (4) and evidence suggests that reduce exposure is limiting interest (5). Severn Deanery has reviewed recruitment methods and identified that part of the problem is confidence and knowledge within vascular surgery. Bootcamps have been used for many years to help ease foundation trainees into the step up that is core surgical (CT1-2s) training (6-8). This report aimed to demonstrate bootcamps can be used to 1) increase awareness of the vascular surgery national network 2) increase trainee confidence in vascular patient management and 3) promote vascular surgery as an exciting career.

Methodology:
New CT1s were required to participate in a 5 day surgical bootcamp (N24). Trainees were split into 4 groups to maximise trainer interaction. Three themes were: 1) career paths - with a junior vascular registrar (St4) and consultant 2) an on-call simulation where trainees made an assessment of a patient with ischaemic limb and discussed with the vascular consultant and 3) didactic review of common vascular presentations and the Vascular surgery network. Trainee surveys were issued pre and post sessions, testing: 1) Self-assessed confidence in vascular surgery, 2) Knowledge of the national Vascular network, 3) Management of an acutely ischaemic limb and 4) Satisfaction with teaching session.

Results:
Pre-session trainees demonstrated a low level of confidence in vascular surgery with 75% self-assessing with poor (N12) and fair (N6), compared to good (N5) and Excellent (N1). Only 10/24 trainees were able to name 3 major vascular centres; and 16/24 of trainees were able to correctly manage an acutely ischaemic foot. Post assessment saw self-confidence increase to 75% fair (N12) and good (N12), all trainees could identify the vascular network, all were able to correctly manage an ischaemic foot. Trainees all recognised the teaching session as relevant and 22/24 stated they learnt something new.

Discussion:
Evidence suggests surgical bootcamps catalysts for general skill and knowledge acquisition (6-8), this review is to demonstrate their efficacy in specific speciality development. Key aims for the the sessions were derived from the joint committee of surgical training (JCST) Core Surgical Training syllabus outcomes for vascular surgery (9). The session achieved its aims of increasing trainee confidence and awareness of the vascular network. In particular trainees commented on the simulation scenario and having to discuss with an actual vascular consultant. Evidence suggests that the majority of errors are made due to poor communication and team-working (10), the simulation developed the ability of the trainees to deliver information and ask key questions, despite perceived seniority gap. Furthermore the consultant feedback was tailored to each individual and was most likely key to the significant increase in trainee confidence. The limitations to this study are that it could not demonstrate whether the bootcamp had a significant impact on vascular St3 applications nor could it demonstrate longevity of confidence and knowledge boosts. It would be beneficial to have a further CT2 bootcamp and perhaps comparison on a national level. There has been an increase in the push for more simulation in surgical training (11). This vascular section of the bootcamp was formed in response to feedback from previous trainees and whilst the time available in a bootcamp setting is limited, we have demonstrated that adequate planning and correct simulation faculty can have a significant impact. Further projects will include a national vascular bootcamp weekend, aimed at CT1-2s with emphasis on hands-on practical skills, assessment and management simulation, and career portfolio workshops. We found the sessions improved confidence in new surgical trainees and we will continue to refine the sessions with feedback from future trainees.

References:
9. JCST. Core Surgical Training Curriculum 2017. Available at: https://www.iscp.ac.uk/curriculum/surgical/surgical_syllabus_list.aspx

Board: F7
Career destinations of generic clinical teaching fellows
S Sadasivam, A Robson
County Durham and Darlington NHS Foundation Trust

Background:
County Durham and Darlington NHS Foundation Trust have been offering generic teaching fellow posts since 2008. These posts are available to any level of doctor post F2 (UK foundation programme year two) and allow the applicant to spend time in any medical specialty or multiple specialties of their choice in a supernumerary capacity. We are aware that our doctors have entered the teaching fellow scheme at a variety of levels of training and have joined a large variety of specialty training schemes; however, their entry levels and training destinations have never been formally documented. Clinical teaching fellow posts are offered in a large number of UK institutions. An NHS job search (1) at a single point in time on 6 January 2019 revealed 21 such posts including a post at our own institution. However, only seven (33%) of these posts were suitable for a post F2 doctor and only the post at our institution allowed a flexible clinical interest alongside predominant teaching commitments. The remaining posts asked for ST3 and above experience, completion of postgraduate qualifications or significant experience in the specialty and had a fixed clinical component apart from one non-clinical post. We wanted to share the variety of specialty training schemes that our doctors entered into to inspire other institutions to open up their entry requirements to attract a wide range of candidates who can provide medical education benefits across multiple specialties within the NHS.

Methodology:
Records of previous teaching fellows since 2009 are held by the education department. The team were aware of which posts the teaching fellows were recruited to and these were added to a database along with the training location.

Results:
33 teaching fellows have worked in the department over the past nine years. 22 (67%) had just completed their NHS foundation programme, 10 (30%) were at ST3 level and there was one GP (3%) who had already attained certificate of completion of training. This GP was excluded from further analysis. The majority of teaching fellows (25, 78%) entered into a training scheme after completing their teaching fellow year. Ten different specialty training schemes were accessed with the most popular specialties being general practice, medicine and anaesthetics. For those who did not enter into a training scheme, three entered into trust grade posts and three did not take up an NHS post.

Discussion:
The results demonstrate that our teaching fellows went into a wide range of specialties after a generic teaching fellow year. All of these specialties will benefit from the teaching skills that these trainees will bring to the role which is a strength of our particular teaching fellow programme. Additionally, specialties that may not traditionally employ teaching fellows e.g. radiology, pathology, public health and palliative care will also benefit. The fact that 78% of teaching fellows had just completed their F2 year demonstrates that teaching fellow roles can appeal to more junior doctors. Students are likely to gain benefits from receiving teaching from doctors with a variety of experience levels and there are likely to be near peer teaching benefits from our post F2 doctors. The variety of career interests of the teaching fellows are also likely to benefit the students. We hypothesise that a teaching fellow role, particularly at a more junior level can provide time and space to reflect on career decisions, making doctors more able to commit to a career decision after having a year to test out various clinical specialties in a supernumerary capacity. This is increasingly important when the progress from foundation programme to training scheme is currently 42.6% (2). We recommend that other institutions adopt the model of the generic teaching fellow rather than having a narrow specialty requirement or person specification in order to attract a wide range of candidates and to provide onward benefit a wide range of medical specialties.

References:
Considering the Person behind the Portfolio - Improving Educational Supervision at the Great North Children's Hospital

S Scales, C Tsilifis, N Jansen, E Riley, D Schenk, A Battersby
Great North Children's Hospital, Newcastle upon Tyne NHS Foundation Trust

Background:
A pilot case study presented at ASME 2018 (1) explored the role of the educational supervisor and how prepared senior trainees and newly-appointed consultants are for this. The GMC National Training Survey highlighted supervision as an area requiring improvement within our centre. The GMC defines an educational supervisor as “appropriately trained” and responsible for “overall supervision and management of a specific doctor’s educational progress” (2). The GMC require organisations to evidence what training arrangements they have locally in order for trainers to be recognised on their register (3). Previous data suggests lack of preparation for the role can cause ineffective supervision (4). The aims of this project were to identify:
1. Preparedness of senior trainees and new consultants for being an educational supervisor;
2. Factors that influence effective and poor educational supervision.

Methodology:
Paediatric ST8s were surveyed about how prepared they were for undertaking educational supervision on becoming a consultant, including attendance at any training courses. A similar survey was sent to newly-appointed consultants. Participants were asked about confidence in relation to educational supervision. A separate survey was sent to paediatric trainees and to a cohort of educational supervisors. Data were gathered on how participants define educational supervision, factors influencing good and poor experiences and remaining training needs. We then compared themes from both sides to try to identify how expectations of the process may influence satisfaction with educational supervision.

Results:
A total of 22 people responded to the initial survey (9 trainees and 13 consultants). Of the consultants, 3 were currently educational supervisors and 2 of these had become supervisors within 6 months of appointment. Only 7 respondents stated they felt ready to become an educational supervisor (2 trainees and 5 consultants). 10 respondents had undertaken formal training (3 trainees and 7 consultants). All 3 undertook an RCPCH-organised course while only 1 consultant did, with the remainder undertaking a mix of local and HENE courses. The subsequent survey identified that trainees and supervisors both agree with several of the key terms from the GMC definition of educational supervision. Both groups have a >75% agreement that regular meetings, planning training and reviewing progress are key to the process of supervision. Themes relating to good supervision include knowledge of the curriculum and preparation, whilst poor preparation, limited availability and lack of personal interest were listed as leading to poor supervision. Both surveys show agreement that the portfolio and the new RCPCH curriculum are areas where both trainees and supervisors feel further training is needed.

Discussion:
We identified that educational supervision is an area that new consultants feel unprepared for, and that this is an area that needs improvement. Despite trepidation about preparedness for the role of being an educational supervisor and the GMC highlighting it needs improvement at our centre, expectations for the process and the role are similar between trainee and consultant. Several of the ‘desirable’ traits for an educational supervisor relate to attitudes (preparation, viewing the trainee as a person, availability) rather than experience. In order to be listed as a GMC-recognised trainer, supervisors must attend specific training and this can be at a local, regional or national level. This appears to differ between trainees and consultants in which type of training is attended. We speculate that this may relate to cost and distance from Newcastle, though further work is needed to explore this. We propose additional training in becoming an educational supervisor is provided at an earlier level. This may be in the form of a formal joint role with an established supervisor for a junior trainee, as trialled in our case study, or by integration into the current ST6-8 curriculum.

References:
Does a 'Bad Day On-Call' help with F1 preparedness?
L Hemmer, B Hammond, R Oliver, N McNiven, L Klein
North Cumbria University Hospitals Trust

Background:
Multiple studies have demonstrated that newly qualified Foundation Doctors (F1s) feel unprepared to start their first job (1-3). Areas where F1s feel least prepared include working in an MDT, time management and prioritisation, on-calls, managing acute scenarios and paperwork (2-4), predominantly areas which require “experiential learning in clinical practice” (Illing & Morrow, 2013) [3]. Simulation of on-call shifts has been used in medical schools to introduce undergraduates to these aspects of F1 life (5) however to the best of our knowledge they have not been used in F1 inductions; many induction programmes consist of predominantly lectures or e-learning (6). We introduced a pilot “Bad Day On-Call” (BDOC) simulation to the F1 Induction Programme at a district general hospital to allow F1s to practice time management and prioritisation skills, working in an on-call team, and using the Trust paperwork, guidelines and pager system prior to their shadowing period.

Methodology:
We adapted a BDOC simulation previously used for 5th year medical students into a condensed, 3-hour simulation of an F1 on-call shift. The simulated ward areas were, where possible, set up with the same paperwork and clinical equipment that would be found on the ward, and F1s used hospital bleeps to contact the Teaching Fellows acting as the on-call registrars. Over 2 days, 33 F1s in groups of 3-4 completed BDOC as F1s on-call for medicine or surgery. They received ward handovers from their registrar, were bleeped with additional jobs throughout and each F1 individually attended a simulation of an acutely unwell patient. It concluded with team debriefs with the registrars followed by a whole group debrief to discuss more general issues. We collected immediate feedback afterwards which included a 1-5 Likert Scale (1= Extremely Unhelpful, 5= Extremely Helpful) and free-text questions for concerns prior to starting F1, which concerns BDOC has addressed, has BDOC raised any new concerns, and any points for improvement. We also sent a follow-up questionnaire after the F1s completed their first post. This explored in further detail how they felt BDOC had affected their preparedness and if it helped to guide their learning during the shadowing period.

Results:
In the immediate feedback 100% of the F1s rated BDOC as helpful/extremely helpful in preparing them for their first F1 post, stating they “[felt] more confident”, “reassured” and “happy to start the job”. The reported concerns about starting F1 were as expected based on previous literature, including “logistics of...making referrals”, “new paperwork/drug charts”, “unfamiliar equipment” as well as prioritising tasks during busy shifts. All of the F1s however reported that BDOC addressed their concerns in some way, by helping them “get back into the feel of being on a ward”, familiarising them with Trust guidelines and documentation, and allowing them to practice other skills such as A-E assessment and SBAR handovers. Data collection and analysis from the follow-up questionnaire is still in progress. From this we aim to further evaluate the effect of BDOC on preparedness and guiding learning during shadowing and the first F1 post, especially as 16/33 reported that BDOC raised new concerns, primarily regarding organisation and prioritisation (11/16).

Discussion:
Including a “Bad Day On-Call” in the induction programme was well received by a group of F1s. They reported that it alleviated concerns about starting F1 and helped them feel more prepared for their first foundation post, in particular regarding familiarity with Trust protocols and documentation. Further evaluation is needed regarding its role in guiding ongoing learning. Interventions which ease the transition from medical student to F1 are key in junior doctors’ wellbeing and patient safety (2) and going forward we aim to develop BDOC as a component of our Foundation Programme Induction utilising the full data from the follow-up questionnaire to guide future developments.

References:
Does a negative surgical experience or perception regarding training during Foundation years affect the desire to improve a career in surgery?

A Lloyd, A Kosti, L Hainsworth, A Kiddle, R Bamford, I Hunter
University of Bristol

Background:
Rota gaps, low morale and concerns about training quality amongst surgeons are leading to many considering other career options. We wanted to understand why doctors choose a surgical career and if perceptions about training were deterring them from this challenging yet deeply rewarding pathway. We surveyed Foundation Year 1 (FY1s) doctors at a District General Hospital to establish reasons why they would not pursue a surgical career and identify modifiable factors for improvement.

Methodology:
An anonymous online survey with a combination of polar and multiple choice questions was designed and sent out to all FY1s. They were asked to say if they had considered a career in surgery, with subsequent questions focusing on their reasons for that decision.

Results:
Response rate. Was 54% (19 out of 35). Of these 47% had considered a surgical career. Those who rejected a surgical career did so due to negative experience on placement (33%) or poor operative experience (38%). Although a misconception, 80% highlighted the ‘unavailability for less than full time training’ (LTFT) as a reason to pursue other careers.

Discussion:
A significant proportion of FY1s have had a negative surgical experience or inadequate operative exposure. Another significant proportion of trainees believed LTFT was not an option and therefore had ruled out surgery. These factors are modifiable. If trainers encourage juniors to attend theater, enhance team camaraderie and explore LTFT options early, training uptake would increase, minimising rota gaps and improving surgical training. Further exploration of these findings would be to survey all students in the deanery or even nationally.
Does assessment drive learning? Evaluating the learning experiences of doctors who take the GMC’s Test of Competence validation assessments

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University College London

Background:
The influence of assessment on students’ learning is well documented in the literature [1,2], however, less is known about the learner’s perceptions of learning through assessments. The General Medical Council (GMC), the regulatory body for doctors in the UK [3], requires all doctors to engage in Continuing Professional Development (CPD) [4,5]. The GMC also uses Tests of Competence (ToCs) to investigate doctors’ professional performance when there are concerns around their fitness to practise [6]. The ToC comprises a written knowledge test and a practical exam and prior to its use in a fitness to practise investigation, the assessment material is first validated by volunteer doctors who take the test under similar conditions to an actual ToC [7]. The main reasons why doctors volunteer to sit the ToC validations assessments are to practise for upcoming professional exams and to gain an insight into their own performance [8], thereby contributing to their CPD. The aim of this study was to evaluate the learning experience of volunteers taking the GMC ToC validation assessments to discover whether this activity could be described as CPD.

Methodology:
A mixed methods study utilising a survey and semi-structured telephone interviews to collect data which were analysed using descriptive statistics and an inductive approach to thematic analysis [9]. A purposive sample of 84 volunteer doctors taking the GMC ToC validation assessments during a two-month period in 2017 was asked to complete the survey before taking the exam. From this group, a smaller sample was recruited for interviews. The survey collected data on: demographics; reasons for volunteering; perceptions of assessment driving learning; and expectations of learning from the ToC validation assessments. Interviews took place four to six weeks after the assessment and investigated what the doctors learned from the ToC validation assessments.

Results:
Eighty-four doctors (100%) completed the pre-ToC survey and 12 doctors were interviewed post-ToC. 89.3% of them were in training grades (F2 to ST8). The median age was 29 years (range 24 - 46 years). Practice for future exams or national selection interviews was the most popular reason for taking part. Of those who completed the pre-ToC survey, 99% agreed or strongly agreed that effective learning can take place through assessments, and 98% agreed or strongly agreed that they expected to learn something through participating in the ToC validation assessment. Emergent themes from the interviews centred around the volunteers’ expectations, their experience of the assessment, and their learning outcomes. They expected the assessment to prepare them for professional exams and recruitment interviews and they felt these expectations were met. They also expected to gain an insight into their performance but felt the feedback they received lacked detail and thus limited the potential for reflective learning. The overall experience was regarded as educationally beneficial and was felt to have impacted their clinical practice by increasing their confidence in the clinical environment, motivating them towards self-directed learning and encouraging them to adopt new approaches to clinical situations similar to those they encountered in the assessment.

Discussion:
Participation in the ToC validation assessment provided an environment for doctors to gauge their level of preparedness for professional exams and offered a platform for new learning which impacted clinical practice. This is in keeping with CPD [5] despite a lack of adequate qualitative feedback on the doctors’ clinical performance. Almost all the volunteers in the study believed, prior to taking the exam, that assessment can facilitate learning and they may represent a self-selecting group. It would therefore be inappropriate to generalise these findings. Further study into the learning outcomes from other formative assessments in the professional setting is recommended to discover other novel opportunities for CPD.

References:
5. Grant J. The good CPD guide: A practical guide to managed continuing professional development in medicine. CRC Press; 2017 Nov 22.

Board: G1
Evaluation of the Emergency Department, Education Fellow, Case Based Discussion Clinics
S Edwards, D Roland
Emergency Department and EM3, Leicester Royal Infirmary, Universities Hospitals Leicester

Background:
With increasing patient demand on emergency departments (ED) in recent years, maintaining a good learning environment for junior doctors can be challenging. Like all departments, there is a requirement for our junior doctors of all levels to have Case Based Discussions (CBD), Mini-Cex’s and Direct Observation of Procedures (DOPS). Our ED has around 100 doctors from Foundation Year 1 level to Specialist Trainee 8 (ST8), and also around 20 non training doctors at various grades. Consequently, the department has had to create ways to meet the educational needs of its doctors. As the feasibility of trying to do that many assessments while people are working in the ED, would likely affect patient care and reduce patient flow. To help with the educational need of the department an education fellow (EF) is employed with 70% of their time dedicated to education within ED. The EF is the equivalent of an ST4 in emergency medicine (EM), with the post existing for the last 5 years. The department created “clinics” where by doctors can book into CBD clinics or shop floor teaching sessions, where mini-cex’s and DOPs can be assessed. These sessions are either with a consultant or EF. The CBD clinics are run off the shop floor, with 30 minute bookable appointments. What is not known from our CBD clinics, is if there are educationally useful. Whilst the service has been running many years, we wanted to see if the CBD clinics are educationally useful and if the doctors are benefiting from them.

Methodology:
Following a CBD with the EF, a paper based evaluation form about the clinic was given to the participant to fill in before leaving. Information collected included grade, the CBD booking process, the number of CBD clinics done before, what the topic they brought to the CBD clinic was, why they brought that topic, what did they want to learn from the clinic, what did they learn from the clinic and did they learn what they wanted to. The results were collated and analysed.

Results:
Since August 2018 there have been 32 people who have booked into the EF CBD clinics. Of these 32 people, 4 did not fill in the form as the EF forgot to give them the form. From the remaining 28 people, 2 were FY1s, 13 were FY2s, 8 were Trust Grade SHOs, 4 were GP trainees and 1 was an EM trainee. All found the booking process easy. There was a large spectrum of topics brought covering all disease processes. Reasons why cases were brought included clarification of management points, uncertain diagnosis, unusual or interesting case, trying to understand how to manage patients in the ED. All participants learnt what they wanted from the clinic, and more. All found the CBD clinics a useful resource.

Discussion:
There is only one adult EF working in the department since August 2018. It was decided to initially evaluate their clinics as it would be easier to collect the information. As opposed to collating the information from over 20 consultants. This initial work suggests that all doctors are learning what they wanted from these CBDs and more. CBDs are a common assessment method for postgraduate doctors and its crucial they are meaningful to the doctor and not just a tick box assessment 1,2. What this work suggests is that a CBD clinic style approach can be educationally valuable. Further work is needed to assess our consultants CBD clinics. Also, further work comparing CBDs done in the clinical environment versus out of the clinical environment to see if there are any educational differences from these.

References:
Foundation Doctors' Perceived Ethics Learning Needs Should Help Guide Their Postgraduate Training

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Background:
It is not surprising given their relative inexperience that Foundation Doctors (FDs: UK doctors in their first 2 years of training after medical school) have trouble with ethical issues they encounter in practice[1]. Ethical issues arise more frequently in clinical work than students anticipate from attending medical school[2]. Furthermore it is undoubtedly true that even the best undergraduate training could not truly prepare a future FD for taking responsibility for ethical decisions[3]. This study was designed to gain insight into the topics that FDs find ethically challenging and for which they would like more training during the 2 FD years. The aim is to use this information to guide formal and informal ethics training at FD level.

Methodology:
Over a 6 week period in February to March 2018 FDs in the UK were asked to complete an anonymous on-line survey about their perceived ethical training needs. The study had research ethics approval from Lancaster University and the approval of Health Education England.

Results:
479 FDs completed the questionnaire; approximately half were in their first foundation year and half in their second. 427 answered the question about what topics they would like to be covered in their foundation years. The 5 topics for which the FDs most wanted postgraduate teaching are shown below:

<table>
<thead>
<tr>
<th>Topic</th>
<th>Percentage of FDs Wanting FD Level Training</th>
<th>Percentage Taught at Medical School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discharge Against Medical Advice</td>
<td>70%</td>
<td>37%</td>
</tr>
<tr>
<td>Sedating Patients</td>
<td>70%</td>
<td>22%</td>
</tr>
<tr>
<td>Emergency Decision-Making</td>
<td>67%</td>
<td>37%</td>
</tr>
<tr>
<td>Withholding/Withdrawing Treatment</td>
<td>66%</td>
<td>62%</td>
</tr>
<tr>
<td>Do Not Resuscitate Decisions</td>
<td>63%</td>
<td>82%</td>
</tr>
</tbody>
</table>

Discussion:
The 5 topics the FDs felt they most needed more teaching on are, as one would expect, ethical issues that a junior doctor is likely to face in clinical practice and may be seen out of hours when the FD has to at least start working their way through a difficult scenario before senior support arrives. Some of these topics are not covered by many undergraduate schools (such as sedating patients) whereas others are usually taught (such as resuscitation decisions). Therefore it is likely that the FDs need specific applied postgraduate practical ethical training on these topics that is best done at FD level once they have experienced working as a doctor. The results form this survey should help Foundation Leads to direct the no doubt limited time in the formal FD education programmes toward those topics of the highest relevance to the FDs. Disseminating this information to GPs and consultants responsible for the clinical training of FDs will alert these senior doctors to prioritise time where possible to discuss these cases with the FD when they arise in clinical practice.

References:
1. Matheson C. and Matheson D. How well prepared are medical students for their first year as doctors? The views of consultants and specialist registrars in two teaching hospitals. Postgrad Med Journal 2009; 85: 582-589

Board: G4
Improving the effectiveness of trauma and orthopaedics teaching in foundation training

C Kocialkowski, L Hainsworth, O Pearce, O Beaumont
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Background:
Musculoskeletal medicine forms a key component of clinical medical practice in both primary and secondary care environments. Despite this musculoskeletal training is usually a low priority in undergraduate curriculums with students often only having one dedication rotation throughout the whole of their undergraduate training (1). Foundation practice rotations in trauma and orthopaedics offers the chance to correct this imbalance by providing junior doctors with training in the management of common musculoskeletal problems and with the clinical skills training in order to assess patients accurately. Unfortunately many junior doctors find their active engagement in musculoskeletal medicine limited during their trauma and orthopaedic rotations as clinical priorities mean that most of their time is spent providing care to in-patients on the wards. It is therefore important that foundation doctors receive a comprehensive teaching programme during their rotation, in order to maximise their limited clinical exposure.

Methodology:
Our study was designed to assess the most effective method of a delivering a teaching programme to junior doctors completing foundation practice rotations in trauma and orthopaedics. During the course of the year there were three different groups of foundation year two doctors, each completing 4 month placements in orthopaedics in our department. A weekly teaching programme was established, comprehensively covering the trauma and orthopaedic curriculum. All sessions were delivered or supervised by an orthopaedic specialist registrar. The first cohort of foundation doctors completed a didactic curriculum, with small group presentations on different weekly subjects. The second group received formal presentations for the first half of their rotation and for the second half were asked to perform case based discussions. The final group were asked to deliver peer to peer teaching with solely case based discussions, albeit supervised by senior doctors. Learning performance was assessed by a standardised assessment which foundation doctors completed before the teaching curriculum, at the interim stage and at the end of their rotation.

Results:
Assessment performance significantly improved in all foundation cohorts throughout the course of the year, with a mean initial assessment score of 54%, mean interim score of 76% and mean final assessment score of 80%. The best performance was achieved by the second cohort who had received half didactic and half self directed learning (final assessment score 90%). The largest improvements in performance occurred in the first group, who had received purely didactic teaching, with a mean initial assessment score of 37% improving to a final score of 80%. Foundation doctor feedback during the teaching curriculum indicated that they liked having a case based discussion component to their learning. However the final group who had received purely peer directed case based learning felt that their teaching had been too unstructured and lacked some direction. Other perceived benefits from the teaching curriculum included a regular point of contact for foundation doctors, an opportunity to discuss other clinical concerns, and an improved sense of belonging to ‘a team’.

Discussion:
Our study has demonstrated that a dedicated teaching curriculum can help to maximise the effectiveness of learning in foundation doctor orthopaedic rotations. By having regular weekly teaching sessions, junior doctors can progress through a dedicated curriculum and ensure that they can use their experience to help guide their management of musculoskeletal disease in future practice. The format of this teaching can also impact on the experience of junior doctors, with a purely didactic teaching too disengaged, and purely peer to peer learning too lacking in focus. Instead a compromise with some formal small group presentations and some case based discussions appears to be the most favourable structure.

References:
iViewExpert: An educational tool designed to capture expert decision making in medicine.
V Blackhall, I Whiteley, J Cleland, P Wilson, K Walker
NHS Highland

Background:
Doctors learn procedural skills from observation and imitation of an expert mentor. This requires the expert to be able to clearly articulate their decision making processes. However, as doctors become expert in complex procedures, their performance becomes increasingly automatic, making it difficult for them to explain their cognitive processes to others (‘unconscious competence’). Cued recall debrief is a technique (validated in the aerospace domain) which externalises an expert’s decision making processes. The aim of this project is to assess the feasibility of adapting the technique to training technical skills in medicine (so called iViewExpert).

Methodology:
This was an observational study. Expert medical practitioners wore a head-mounted camera to capture a complex procedure (colonoscopy). Footage captured was reviewed along with a facilitated debrief in order to externalise cognitive processes and capture expertise. Debriefs were recorded and formed an audio commentary. The edited videos plus audio commentaries formed learning packages, which were watched by learners with experience in the procedure: so called “experienced practitioners”. Pilot work suggested that these individuals may be more likely to benefit from the process than novices. Questionnaires examined acceptability and educational value of the technique using Likert scales and free text answers.

Results:
Ten expert colonoscopists participated. Twenty procedures were recorded, fourteen were debriefed and one was selected for learners to watch. All experts stated that wearing the head-camera did not interfere with the procedure. They reported moderately high levels of new insights into their own performance. These insights related to the speed of procedure completion, extent of head movements and degree of patient interaction. Twenty eight experienced practitioners watched the debrief video. Overall, they found the intervention of moderate educational value and most (60%) learned something new that would be useful in practice. This related to endoscope handling, use of terminology or teaching style. Many participants considered that the technique addressed some of the challenges associated with standard training for this procedure, for example difficulties of concurrent reporting and time pressures. They made suggestions as to how the learning experience could be improved (e.g. providing a view of the endoscopist’s hands during endoscopy and debrief).

Discussion:
The intervention could represent a useful adjunct to existing training methods in colonoscopy. The technique may also have a role in other complex technical and non-technical skills which are reputedly challenging to teach. Accessing hitherto untapped subtleties of expertise is likely to improve patient safety and improve trainees’ learning experience.

References:
Naturalistic observation study in the operation theatre: safety and training risk factors
S Isreb, J McLachlan, J Illing, S Attwood, H Hesselgreaves
NHS

Background:
Surgical training is a complex multifactorial entity. It relies on the availability and trainers’ ability to safely delegate appropriate training opportunities to their trainees. Factors affecting this decision plays an important role in determining trainees’ educational chances. Aim To conduct an observational study in theatre to capture the complex surgical training environment with specific focus on surgical safety and factors affecting training.

Methodology:
Observation of supervised laparoscopic cholecystectomy operations were conducted in ten different Trusts within one English Deanery. Memos were made using audio-recordings to capture information and permit the researcher to blend into the background without constantly reminding theatre staff that they were being observed. Video-recordings were made during the procedures, and reviewed to triangulate the findings. The aim was to identify any events that interrupted the operation progress and threats to patient safety and optimal training. Trainees and trainers were interviewed following the observation.

Results:
Results were analysed thematically. Safety factors included additional stress following the high levels of noise and the poor image quality from old laparoscopic stacks, surgeons’ cognitive relaxation and having inexperienced theatre team. The later was one of the factors affecting training along with consultant’s recent complications, affecting confidence.

Discussion:
This study highlighted the need to discard inadequate laparoscopic stacks. The good stacks where usually used by experienced consultants, leaving the less experience trainees to struggle with poor images increasing safety risks. A trainers’ attention is split between teaching, safety and operation progress. Having experienced theatre staff was important for reducing mental-burden to concentrate on more teaching. Lave and Wenger’s (1) described a learner’s progress from peripheral participation to a more central with experience. This transition was observed in trainees in theatre. Increasing theatre teams’ awareness of this transition might support trainees to make the needed progress.

References:
Peer-Led Presentation Skills Training: Is it Beneficial for Speciality Trainees in Geriatric Medicine?
R Patel, H Wolfendale, J Ragunathan, R Parikh
Stockport NHS Trust

Background:
Being able to present well orally is important to clearly convey ideas and concepts. Doctors deliver formal training sessions throughout their careers. Within the MSc programme in Geriatric Medicine (Salford University) there is an aim to develop such skills. North-West Speciality Registrars (StRs) in Geriatric Medicine prepare oral assignments and are encouraged to explore the use of multimedia. When surveyed, StRs reported unmet learning needs relating to delivering presentations. Thus, a group of StRs created a peer-teaching intervention to develop presentation skills.

Methodology:
Peer facilitators delivered a 60-minute workshop. Learners were introduced to educational theory related to multimedia use and cognitive load theory (1). This was followed by activities that aimed to further explore such principles and included the generation of a presentation summarising a series of presenting ‘tips’ by the group. The workshop included an example of a ‘poor’ oral presentation. Interactive exercises explored the group’s appraisal of the presentation before considering how it might be improved. The exercise encouraged learners to consider how to convey concepts and engage the audience. Written feedback was sought as a method to evaluate the session. Learners were asked to consider what constituted an area of difficulty when preparing/delivering an oral presentation. Participants were asked to reflect upon whether this session encouraged a different approach to presentations. Comments for improvement were requested to guide onward re-evaluation of further such teaching.

Results:
30 geriatric medicine StRs completed the questionnaire. 18 (60%) reported some challenges with the preparation and/or subsequent delivery of oral presentations. Areas of difficulty commonly cited included confidence and the appropriate selection of information to present. Most learners found the session useful and expressed that it developed their presenting skills and confidence. Introducing cognitive load theory, as a concept to aid the construction of presentations, was perceived as educationally beneficial. Trainees found the overview of practical tips useful; particularly the suggestions provided on methods to use visual images effectively. The benefits of using an integrated presentation style (blending visual and oral components of a presentation together) emerged as a powerful take-home message within the feedback. Learners felt that the workshop could be improved by setting a more generic task that would allow them to practice some of the elements learnt; with a focus on implementing the tips shared on reducing the visual burden of the information presented.

Discussion:
Despite the fact our learners were relatively senior trainees, most viewed oral presentations as challenging. Overall, learners found this peer-led intervention useful in terms of confidence and knowhow. This was built by linking theory (such as cognitive load theory) to practical exercises to show how effective oral presenting skills and media can be intertwined to create an effective presentation. Generating practical presentation ‘tips’ was regarded as particularly beneficial in this regard. Assumptions may arise that more senior trainees are comfortable in giving oral presentation, which was not upheld from this surveyed group. We would encourage trainees and trainers to reflect on the need to develop such skills and try a similar peer-teaching intervention.

References:
Small Group Case Based Discussions and Specialty Specific Forums: A Model for Delivering Extracurricular Postgraduate Teaching in Palliative Care

S Case, J Schulkind, R Biggart, H Fuller, S Lang, M Flory, C Reid
University Hospital Bristol NHS Trust

Background:
Recognising the need for and delivering high quality end of life care as part of a multidisciplinary healthcare team is an integral curriculum component for foundation doctors and core trainees in medical and surgical specialties [1,2,3]. The General Medical Council recommends trainees take part in regular educational activities to maintain and develop confidence in this area [4]. Although part of the core curriculum for foundation doctors at University Hospital Bristol NHS Trust (UHB), local opportunities for postgraduate palliative care teaching is limited. The aim of our programme was to:
1. Establish a postgraduate teaching program in palliative care at UHB for foundation trainees
2. Use participant feedback to adapt future sessions to ensure the learning needs of trainees were met

Methodology:
In the first year small group teaching sessions for foundation programme trainees were held over a twelve month period (August 2016 - July 2017) at UHB, Bristol, UK. Sessions were lecture based and led by either a hospital palliative care consultant or a consultant from another specialty with an interest in palliative care. Feedback was collected in the year’s final session. In response to feedback, the structure of teaching in the second year was changed. Over a twelve month period (August 2017-July 2018) we held small group teaching sessions for foundation doctors focusing on case based discussions. We also held regional forums open to medical students and postgraduate trainees from across the region with lectures from hospital palliative care consultants and specialty doctors. Feedback was collected at the end of each regional forum.

Results:
In the first year six small group teaching sessions were held on symptom control, recognition of dying and the provision of palliative care in cardiology, paediatrics, hepatology and renal medicine. At the end of the year participants (6/6; 100%) strongly agreed the sessions were pitched appropriately, informative and relevant and (6/6; 100%) agreed or strongly agreed they would change their clinical practice. Trainees valued the opportunity to learn more about palliative care in different specialties, acquire skills for use in future practice and participate in case based discussions. Trainees identified a need for a space to discuss and reflect on patients they had cared for. In the second year three regional forums were held with lectures on symptom control and the provision of palliative care in cardiology, respiratory, hepatology and paediatric medicine. In addition six small group teaching sessions for foundation doctors to discuss their own cases were held and facilitated by a palliative care consultant. Feedback from two out of three forums was available for analysis. Overall participants agreed or strongly agreed the sessions were pitched appropriately (17/17; 100%), informative (16/16; 100%), relevant (15/15; 100%) and would change their clinical practice (13/15; 87%). The majority of participants agreed or strongly agreed after the sessions they felt more confident recognising (12/15; 80%), managing (14/15; 93%) and discussing (12/15; 80%) symptoms of dying. Trainees valued the specialty specific teaching with clinical relevance and practical advice but identified a need for teaching on the practicalities of delivering good end of life care in their own jobs.

Discussion:
Despite the expectation of junior doctors to deliver high quality end of life care, we identified an unmet local need for more postgraduate education in palliative care. Trainees particularly valued specialty specific teaching on the provision of palliative care locally and the opportunity to reflect on personal experiences of caring for the dying patient. Although our results are limited by missing feedback, they suggest that informative, relevant teaching which provides trainees with additional skills for caring for patients at the end of life can be successfully provided, although it may have to be provided outside of normal working hours.

References:
1. The UK Foundation Programme Office; The National Foundation Programme Curriculum. 2016. Available at: http://www.foundationprogramme.nhs.uk/content/curriculum [Accessed 13th December 2018]
2. The Intercollegiate Surgical Curriculum Programme; Core Surgical Training. 2017. Available at: https://www.iscp.ac.uk/curriculum/surgical/surgical_syllabus_list.aspx [Accessed 13th December 2018]
Small group learning to aid broaching of lifestyle choices and advise with patients in the Physician Associate Programme
S Din
Barts and The London School of Medicine and Dentistry, Queen Mary University London

Background:
The rising levels of obesity is currently predicted to have a cost of £9.7 Billion(1). In 2016/17 there were 617 thousand admissions in NHS hospitals where obesity was recorded as the primary or a secondary diagnosis(2); an increase of 18% from 2015/16 (2). Research currently shows GPs, Nurses and Medical students feel unequipped in delivering lifestyle advice to make changes to obese patients (3-7). This is likely to also be a problem with Physician Associates (PA), who have only recently been added to a voluntary register curriculum that currently does not require PAs to recognise and manage patients with obesity. It is possible that the lack of awareness that PAs have in this field is because of the duration of their course, which is only two years. This theory has not been previously studied within the healthcare profession (HP) in the UK, and thus, merits further exploration. This study aims to highlight and explore current attitudes and knowledge in PA students in managing this group of patients. To aid this, a small group Peer Assisted Learning (PAL) session shall be used to further develop their knowledge and reveal gaps in this area of preventative medicine. This study will begin to highlight a different approach that can target these HPs that have a high turnover, and are mainly employed in primary care, with their increased flexibility in practice (8) could be an immediate solution to a building problem.

Methodology:
This is a qualitative study that will use 2nd year PA student’s prior knowledge and engagement with patients, including, lifestyle choices, such as, exercise and nutrition, from a constructivist viewpoint. A small group teaching session was developed using Peer Assisted Learning (PAL) with the AMEE guide (9) to aid the framework for the session. This was then delivered by a student to aid their studies and knowledge in delivering advice. The intervention explored ways to approach discussions with patients regarding lifestyle choices and looked into what they should know to be able to tailor advice on how to make lifestyle changes. This consequently stimulated the discussion in the focus group which followed on from the intervention. The focus group allowed for a discussion to capture views as a consensus amongst them regarding their values and attitudes and how this varies from previous experiences. Following this, thematic analysis (10) was then used on the transcripts collected from the focus group after the PAL session.

Results:
The analysis and result should reveal any gaps in the current taught curriculum regarding lifestyle advice. It explores current experience feelings and knowledge which may vary based on experience the PAs have previously had during their previous year of study.

Discussion:
Following on from the lack of standard practice in delivering lifestyle advice to patients from other healthcare professions. PAs too experience difficulty in delivering this. The PAL session in an early addition to the current taught curriculum to aid PAs in managing this group of patients. Their current ability to not be able prescribe medication for any group of patients will allow them to further explore this area and encourage them to devise better methods and tailored advice to make changes to their lifestyle before this becomes a co-morbidity to them.

References:


Stories of Success: Demonstrating improved performance in junior doctors after simulation: a 12 month follow up study
H Stirling, N Oliver
NHS Lothian

Background:
Much of the credibility of immersive simulation rests on the assumption that the experience of simulation positively impacts on clinical behaviour. Research has shown a positive relationship between simulation and the development of skills and confidence1-3 but it is often stated that more research is required to demonstrate transfer of learning to the workplace, impact on patient outcomes and to demonstrate the longitudinal effects of behaviour change1,3,4. In fact, many studies demonstrated that postgraduate continuing professional education had a lack of effect on physicians’ performance of current practice guidelines5. Simulation has been highlighted as an important tool in improving safe delivery of medical care but medicine is lagging behind due to financial limitations, therefore it is essential that we can evidence an improvement in clinical competence and patient safety to justify this cost2. Kirkpatrick, who developed the model of evaluating training programmes, stated that ‘there is a big difference between knowing principles and techniques and using them on the job’6. Therefore, it is not enough to just show improvement in skills during simulation, these skills need to be taken further and applied to doctors’ everyday practice. It has been said that if people want to change behaviour, the following must be true: want to improve, recognise own weakness, work in permissive climate, have help from someone who is skilled, and have an opportunity to try out new ideas6. Since all these criteria can be met in an immersive simulation programme run by skilled debriefers, surely it must be possible to demonstrate behaviour change and improved performance following a simulation programme? In 2013, a simulation programme was set up for first year junior doctors, to respond to areas of the curriculum which they were finding hard to evidence. This programme consists of three sessions that run over the year, focusing on technical and non-technical elements of patient care. This study sought to look for what impact, if any, did the simulation programme have on the clinical performance and behaviour of first year junior doctors in NHS Lothian a year after they attended their first simulation teaching.

Methodology:
This was a qualitative study utilising a narrative enquiry approach. Between 2013 and 2018, a voluntary questionnaire was sent to all junior doctors at completion of their first year of training. This questionnaire asked them to briefly describe, if possible, two specific accounts of when they were able to apply what they had learned during their simulation experience into their clinical setting. Questionnaires were coded and analysed using thematic analysis.

Results:
264 junior doctors (n=264) returned their completed questionnaire for a total of 528 narrative accounts for analysis. The narratives draw strong, contextualised links from what was learned in simulation to direct positive impacts on their performance. The following five themes were identified: situational awareness, teamwork, communication, legal decision making, and the acute management of the unwell patient. The most commonly cited themes were impacts in performance in acute management (458 separate accounts), communication (374 accounts), and teamwork (364 accounts). The accounts in this study express a clear link between their experience in a simulation programme and their direct clinical performance, often months after the learning experience.

Discussion:
Whilst acknowledging that the responses received in this study are inherently subjective in nature, it is asserted that the large sample size, along with the 5 year span of data collection year, add a level of validity in responding to the question at the centre of this enquiry. Simulation has been seen to positively contribute directly to increased clinical performance, leading to the logical extension of impacting where it truly matters - safer patient care.

References:

The importance of multi-speciality lead teaching in the management of surgical patient.
P Orchard, K Taylor, N Bashir, H Makins, J Shabbir, R Bamford
Musgrove Park, Taunton

Background:
Management of surgical patients on the ward requires not just knowledge of the surgical pathology, techniques and complications but also ensuring adequate analgesia, control of chronic medical problems and the multi-modal challenges older surgical patients can offer. Within our region there was a paucity of this type of training. All trainees within our region take part in a bootcamp induction programme that was adapted to include sessions on management of post op analgesia and care of elderly patients surgical patient. These sessions were lead by a team from each speciality.

Methodology:
We questioned all CT1s who attended the 2018 core surgical bootcamp. Using a Likert 5 point scale we assessed their pre and post course confidence for management of post op surgical patients, challenges related to older surgical patients, and overall confidence managing an older surgical patient. We also looked at their previous experience and knowledge of pain management.

Results:
24 core surgical trainees attended the induction bootcamp. 50% of trainees stated they had had formal training in pain management for surgical patients. Trainees stated they were confident in recognising a patient in pain (4.43), but were less confident in managing the patient (3.71) and altering their pain relief (3.21). Following the session the trainees stated their knowledge had increased (4.59) and they felt more prepared to manage patients on the ward (4.59). With regards to care of the older surgical patient. Trainees stated they felt more familiar with issues related to peri-operative care of older surgical patients post following their teaching session (4.00 from 3.17, p=0.0001), and overall they felt more confident in managing an older surgical patient (4.45). Overall the trainees confidence in managing a post op surgical patient increased (3.50 to 4.0, p=0.03)

Discussion:
Following formal teaching sessions trainees confidence and knowledge on pain and management of the older surgical patient increased. We were able to involve local enthusiastic teams ensuring trainees received the most up to date and relevant information. As part of a training programme, these sessions have contributed to trainees overall confidence in managing the post op surgical patient.

Board: H4
The role of cognitive hazard training in laparoscopic surgical skills acquisition: a feasibility study
Siddeek Isreb, J McLachlan, J Illing, S Attwood, H Hesselgreaves
NHS

Background:
Introduction UK Surgical training is under pressure due to reductions in training time and training opportunities, which pose patient safety risks. Cognitive hazard training was suggested as a possible solution inspired by the benefits in aviation industry. In his review article Wallace et al highlighted the need for such training despite its high cost and the need for expert trainers. Aim This study aims to design and test the feasibility of an online standalone module to address the current gap in cognitive surgical training.

Methodology:
An online standalone, Cognitive Hazard Training module for laparoscopic cholecystectomy was created. It combines multiple choice questions (MCQs), extended matching items (EMIs), and single-line free text questions in sections with the relevant sketch images, real life hazards, and video clips, highlighting mistakes to enhance safety knowledge, reduce bias, and improve self-limitation awareness. Two experts were invited to validate the prototype before testing its feasibility in one English Deanery training environment. Out of 93 invited candidates, 47 participated and 33 completed the Module. Those included 3 juniors, 20 SPRs and 10 consultants. Candidates’ answers were quantitatively analysed according to their level. Qualitative feedback was also collected from 27 candidates, via semi-structured interviews.

Results:
The overall feedback from the feasibility study was positive. Results supported the value of this online resource in enhancing knowledge and awareness. Interview data also suggested the module’s potential to change trainees’ practice by being more cautious and adhering to the safety steps of dissection.

Discussion:
This new training module overcomes some of the previously reported problems in surgical cognitive training. It is a stand-alone online resource with low running cost which reduces the needs to recruit expert trainers. The feasibility study supported the module value in enhancing hazard awareness and creating an attitude shift towards adherence to safety steps during the procedure.
The use of low fidelity simulated wardrounds is effective in all levels of surgical training.
P Orchard, R Bamford, A Humphreys, T Walker, J Coulston, J Shabbir
Musgrove Park Hospital, Taunton

Background:
Non-technical skills are as important as technical skills during surgical training but often neglected by trainees. Leading a surgical wardround is one non-technical skill which is often not focused on, and combined with the proposed changes in the general surgical curriculum (trainees being directly assessed in leading a wardround) it is an essential that these skill are addressed at both a core and speciality trainee level. During our regions core and speciality induction bootcamps trainees attended a simulated wardround. These wardrounds took place outside of the ward setting, with one trainee leading and other trainees being the patient, other staff members and observers. The scenarios used were relevant to the level and speciality of the trainees, and were a combination of elective and emergency patients.

Methodology:
Over the past 3 years all new surgical core trainees, general surgery and vascular surgery ST3s attended a surgical induction bootcamp which contained a simulated wardround. All trainees were given a confidential pre and post course confidence questionnaire using a likert scale (1 - very unconfident to 5 - very confident.) The pre and post course scores were then compared using unpaired t-test.

Results:
Between 2016-2018 74 core surgical trainees, and 44 general and vascular ST3s have attended an induction bootcamp. In the core trainee group 94.3% trainees enjoyed the session with 88.6% learning something new. Each year both confidence in leading a ward round and confidence assessing a patient on the ward round increased, with both being statistically significant. Confidence leading a wardround increased from 3.42 to 3.92 (p=0.0001), and confidence assessing post op patients on the wardround from 3.41 to 4.08 (p=0.0001) In the ST3 group 92% of trainees enjoyed the session with 78.9% agreeing they learnt something new. There was a statistically significant increase in the confidence leading a wardround (3.68 to 4.06, p=0.0314). There was also an increase in the confidence in assessing post op patients (3.86 to 4.0) but this was not statistically significant.

Discussion:
The use of low fidelity simulate wardrounds has been shown to increase the confidence in surgical trainees when leading the wardround, and assessing post op patients. This increase in confidence has been shown both in core trainees as well as new registrars showing it is relevant to trainees of all levels.
Transitions for Novice Anaesthetists- a qualitative study
N Gostelow, S Rice
University College London / Royal College of Physicians

Background:
In an educational context, a transition can be defined as a period of discontinuity in which a learner must change their behaviour, and the process of navigating this discontinuity (1). UK anaesthetic training begins with a “novice period”. The Royal College of Anaesthetists (RCOA) define a novice anaesthetic trainee as a junior doctor in their first three to six months of anaesthetic training (2). By the end of their novice period, a trainee is expected to be proficient in on-call duties and managing anaesthesia within a defined scope of practice consisting of medically uncomplicated patients (2). This period can be considered an important transition. Whilst other transitions in medicine have been studied, such as a student becoming a new graduate (3), there are no studies exploring the transition experienced by novice anaesthetists. This study aims to explore the question: How do first year (CT1) anaesthetic trainees navigate the transition into anaesthetic training during the first six months in programme?

Methodology:
This is a qualitative study adopting an interpretivist paradigm (4). The study will be conducted within the anaesthetic department of a large District General Hospital. All novice trainees within the department will be invited to participate. All participants who volunteer will attend a focus group to discuss initial ideas and be asked to reflect on their first 6 months of training and their experience of learning and transition. This data will be used to create a schedule for individual semi-structured interviews to explore perspectives in more detail. All interviews will be audio-recorded and transcribed anonymously. An inductive analysis will be performed using a hybrid model of emergent and template coding (5). Data collection is expected to take place from January- May 2019.

Results:
Results of the focus group and interviews will be presented.

Discussion:
This small study will provide an insight into trainee perspectives of the transition into anaesthetic training and assuming a new professional identity. The discussion will compare and contrast this with other important transitions within medical training and evaluate if anaesthetics brings the same or a different set of challenges to the learner. This information could be useful for trainers supervising learners undergoing this transition or planning formal learning events during the novice period.

References:
What are Foundation doctors' views on careers guidance?
M Baker, T Baker
University College London

Background:
Uncertainty about future career paths is one of the contributing factors to the rising proportion of junior doctors taking career breaks, which is exacerbating the problem of rota gaps in the NHS [1]. Junior doctors feel under pressure to choose a specialty very early in their careers and this has especially been the case since Modernising Medical Careers (MMC) was introduced in 2005 [2,3]. They feel there are areas of medicine they know too little about [2] and that the relative inflexibility of postgraduate medical training would make it difficult to change specialties further down the line, should they decide to do so [1]. Although the dynamics of career choice in the early medical postgraduate years have been extensively researched [4,5], fewer studies have looked at doctors' views on careers guidance and its influence on their career decision-making [6]. This study sought to gain information from doctors within a year of graduation on their perceptions of careers advice to better understand what kind of careers guidance would be most useful to this group.

Methodology:
A mixed methods design utilising a survey to collect data which were analysed using descriptive statistics and thematic analysis. A 15-question survey was given to a convenience sample of 40 FY1 doctors in one UK district general hospital via email and in person during two separate mandatory Foundation programme teaching sessions. The survey asked questions about their experience of career advice to date; level of certainty of careers choice; knowledge of the specialty recruitment requirements; knowledge of specialty training programmes; and their views on the usefulness of careers advice.

Results:
Twenty-two (55%) out of 40 FY1 doctors completed the survey. 54.5% had received careers guidance at medical school and 36.4% had accessed formal careers advice since graduation. 45.5% had decided on a career path, while 4.5% were completely undecided, the remaining 50% had a shortlist of preferred specialties. 41% felt they did not have enough knowledge about specialty recruitment requirements and 36.4% felt they did not have enough knowledge about specialty training programmes. 90% felt that more careers guidance would be useful during Foundation training. Thematic analysis of free text revealed four themes around their views on useful careers guidance: Timing of the advice; nature of the advice; who delivers the advice; and content of the advice. The FY1 doctors wanted specialty-specific careers guidance in the FY1 and FY2 years, delivered by enthusiastic trainees and consultants and containing detailed information about recruitment processes, different training programmes and various aspects of career development.

Discussion:
This study highlighted junior doctors' desire for careers guidance early in their careers. Existing literature suggests that career advice requirements are higher in medical students and year one doctors [3], and that career advice given at these early stages may encourage doctors to pursue careers in shortage specialties [7]. The findings in this study also suggest that careers guidance is not just for the undecided. Most of the doctors wanted more careers guidance during Foundation training even though almost half of them had already made a career decision. A structured approach to careers guidance is therefore needed in both the undergraduate medical and Foundation training curricula to increase doctors' awareness of the varied career paths within medicine and to enable doctors to maximise training opportunities and build up a career with which they will be more satisfied and dedicated to.

References:
Practice Based Teaching And Learning

Acute scenarios simulation for Foundation Doctors: does it work?
L Baxter, P Jones
South Tyneside District Hospital

Background:
Many junior doctors feel poorly prepared for emergency situations (1). This study examined the role of simulation as a tool to increase Foundation doctor confidence in acute scenarios. It also evaluated whether Foundation doctors found the course useful, learned from it and consequentially changed their practice. Simulation is in its pilot year at South Tyneside District Hospital, so there is a need to identify if on-going time and effort spent on simulation is a worthwhile investment.

Methodology:
21 F1 doctors and 25 F2 doctors attended a half day simulation session on acute and common scenarios. Foundation doctors attended each session in groups of 3-4. Each participant completed a specifically designed scenario of 15 minutes length while the others observed, and they all participated in debriefing each scenario. The scenarios were all based around an ABCDE assessment, or acute mental health assessment, with appropriate escalation and handover to a senior. They were all mapped to the Foundation Programme curriculum. Examples of scenarios include ACS, GI bleed, paracetamol overdose, and seizure, in addition to others. A pre- and post- simulation questionnaire was used to assess trainee confidence over several areas: overall confidence, airway, breathing, circulation, disability, exposure, mental health, handover and prescribing. Post session feedback also asked whether the training was considered useful, whether attendees felt it had improved their clinical ability, and how likely they were to make changes to their practice based on this session. Likert scale was used for each response (2).

Results:
F1 doctors’ average confidence across all areas was 48% pre-simulation and 61% post-simulation, equating to a mean proportional increase from baseline of 27%. F2 doctor’s pre-simulation confidence was overall 53% which rose to 63% post-simulation, with a mean proportional increase of 20%. For both cohorts there was increased confidence in all areas assessed. Usefulness of session was rated at 99% and likeliness to change practice at 95%. A post simulation survey was sent 1-6 months post session to all attendees. This survey is currently still open but responses so far (n=8) report 75% have made changes to practice and 12.5% have not yet but intend to. Examples of changes reported include increased confidence in speaking up in emergencies, improved handover, keeping an open differential, and tackling a problem systematically using ABCDE assessment.

Discussion:
Simulation has led to an increased level of confidence, learning and subsequent changes to practice amongst junior doctors across all areas assessed. It is hoped that these changes to practice will ultimately result in improved patient care. Moving forward we aim to ensure this is maintained by working to integrate simulation into Foundation Teaching throughout their training.

References:
2) Likert, Rensis (1932): A technique for the measurement of attitudes, Archives of Psychology, 140(1), 44-53
Preparing to talk about dying: Using simulation training to prepare final year medical students to care for dying patients
A Wallace, P Nalaway, W Brown, V Westcott, P Rusby, J Rees, J Dovey, K Forbes
University of Bristol

Background:
A recent report from the Royal College of Physicians, ‘Talking about dying’, has highlighted that doctors’ lack confidence in discussing death and caring for dying patients[1]. Avoiding talking about death or discussing it poorly leads to increased distress for patients, relatives and members of staff. It also leads to decisions being made that result in inappropriate interventions, which may confer little morbidity or mortality benefit, and are potentially contradictory to the considered wishes of the patient. Many people feel that there is an inadequate emphasis on undergraduate palliative care education. For example, in ‘Talking about dying’ the writers observe that in many medical school curricula, there is an emphasis placed on seeing a certain number of specific events, such as childbirth, that is not mirrored in palliative care training[1]. Furthermore, certain complex discussions such as treatment escalation are considered inappropriate for medical students to discuss before they qualify, yet they may be expected to have these discussions in their first few weeks as a doctor[2]. An area of growing interest is the application of simulation-based education to palliative care, in order to give students the opportunity to practice and reflect upon difficult situations involving dying patients they may encounter in clinical practice[3]. The primary objective of this study is to determine if simulation-based teaching can improve final year students’ confidence in caring for dying patients.

Methodology:
A. Population - final year medical students at Bristol University during their Preparing for Professional Practice block (January - March 2019).
B. Intervention - optional sign up sessions for 3 students at a time, each involving 3 pre-prepared scenarios focused on end of life care. All cases will be written by post-Foundation Year 2 junior doctors before being quality checked by a consultant in palliative medicine.
C. Measuring - a 3 part questionnaire has been designed for the students. This will assess students’ pre and post confidence in caring for dying patients and also seek some qualitative feedback on the teaching programme. D. Outcomes - Primary outcome is to change confidence pre and post intervention. Secondary outcomes are qualitative feedback describing student perceptions of teaching, and also assessment of prior experience of caring for dying patients.
E. Further work - following the simulation sessions, students will be asked if they would be willing to be contacted for a further questionnaire in the months after they start FY1. This will enable us to see whether students feel this teaching has led to improvements in their clinical practice.

Results:
Data collection will not be completed until the end of March. We will report on their confidence in dealing with the dying patient before and after the teaching programme, as well as provide an account of their clinical experiences of palliative medicine prior to start of these sessions.

Discussion:
Caring for dying patients is one of the most challenging aspects of healthcare professionals’ work. A significant proportion of people currently die in a hospital setting and this is anticipated to increase in absolute terms due to our aging population[4]. This is likely to result in the ever increasing involvement of junior doctors in this aspect of a patient’s care. There is evidence to show that newly-qualified doctors feel under prepared for this part of their job[5,6]. One Foundation Year 1 (FY1) doctor described the following regarding communication in end of life care - ‘...everything I do for the first time I feel out of my depth... I didn’t envisage having... to take that sort of initiative in my F1 year’[2]. This, in the context of RCP’s recent report, demonstrates the importance of developing and innovating in palliative care education at undergraduate level, and we hope that this study will establish that simulation training is one way in which it can be improved.

References:
5. Gibbins J, McCoubrie R, Forbes K. Why are newly qualified doctors unprepared to care for patients at the end of life? Medical Education. 2011;485:389-399
Roleplaying in Radiology: Preparing Medical Students for Interaction with Diagnostic Imaging Services
W Brown, P Nalwaya, A Wallace, V Westcott, P Rusby, J Dovey, J Rees
University Of Bristol

Background:
The importance of providing undergraduates with the skills needed to interpret basic diagnostic imaging modalities is well recognised [1]. Despite this, exposure to radiology as a specialty at medical school may be limited, particularly where the teaching of radiology is integrated into other aspects of the curriculum, or taught within the bracket of other medical or surgical specialties [2]. As such, medical students continue to complete their undergraduate training with limited exposure to radiology departments, allowing stereotypes around radiology - such as that of an isolated doctor working alone in the dark - to persist [3,4]. This lack of understanding may be particularly problematic for students as they start work as foundation doctors and are expected to interact with clinical radiologists on a daily basis, with miscommunications potentially leading to both difficult conversations and inappropriately rejected referrals [5]. Whilst we aim to increase undergraduate awareness of both how a radiology department functions and how to structure imaging requests, this project focuses particularly on using roleplay as a tool to simulate conversations with radiologists that are commonly faced by foundation doctors. We hope to see this approach translate to an increase in the confidence and aptitude of final-year students in their interactions with the radiology department.

Methodology:
3-hour workshops for final-year medical students will be held in February and March 2019. These will see time divided evenly between tutorial-based teaching, and a selection of scenarios, each involving a roleplay and subsequent debrief. Pre-session and post-session questionnaires will be distributed to all students attending; these will explore undergraduate perceptions of radiology as a specialty, as well as subjectively assessing student confidence and capability in interacting with the radiology department and requesting relevant imaging. Objective assessment of student ability relating to the above will also be made by means of a series of short-answer questions pre- and post-session.

Results:
We will report on how participation impacts on student perceptions of the relationship between foundation doctors and radiology departments, and whether it affects student confidence in dealing with the day-day issues and discussions that may arise in relation to this. We will also assess whether there is an impact on student capability in dealing with common problems that may arise when ordering medical imaging, by means of both subjective self-evaluation, and objective assessment. The relative influence of tutorial-based teaching and simulated discussions with radiology will be directly compared and evaluated where appropriate.

Discussion:
Whilst current courses are often appropriately concerned with the teaching of radiograph interpretation to the standard required to work as a foundation doctor [6], there is no published literature focused on preparing students for interaction with the radiology department itself. This is despite the fact they are likely to have had limited exposure to radiologists in medical school, and that requesting imaging constitutes a major aspect of a foundation doctor's job role. We will use the results of this study to evaluate whether final-year students are likely to benefit significantly from an introduction to this relationship prior to commencing work, and whether roleplay in particular may prove an effective means of helping students develop their approach to interacting with radiologists.

References:
The Dundee Longitudinal Integrated Clerkship - a phenomenological exploration of the experiences of medical students.
Z McElhinney, M Bartlett
University of Dundee

Background:
The Dundee Longitudinal Integrated Clerkship (LIC), in which medical students spend their fourth year attached to a GP practice, is the first of its kind in the UK, although it is a model of medical education employed by a number of medical schools worldwide (1). The LIC is a pilot currently in its third year, with a cohort of 6 students placed in general practices in Dumfries and Galloway. Initial research has found that students value the immersive experience offered by receiving their clinical teaching in a general practice environment and by following patients into secondary care for any further treatment or investigations required (2). This study aims to further explore how the LIC is experienced by students. It will explore three main areas: 1. The ease and perceived effectiveness of learning from patients by following them into secondary care; 2. Students’ understanding of self-direction, how this is enacted in the LIC, and whether participation in the LIC has changed their approach to learning; 3. Students' self-efficacy and how this is affected by the LIC. The evidence gained from the study will contribute to the development of the LIC in future years, enhancing the experience for future students. It will also contribute to the international body of literature on longitudinal clerkships. Importantly, being the first longitudinal clerkship to be implemented in the UK, it will be of significance to the domestic medical education community as more longitudinal clerkship programmes are introduced in UK medical schools.

Methodology:
The study is a qualitative exploration of the Dundee Longitudinal Integrated Clerkship. The epistemological basis of the study is constructivist, taking the ontological perspective of reality as complex, and context dependant. The theoretical basis of the study lies in social cognitive theory (self-efficacy, situated learning theory) and adult learning theory (self-directed learning). Interviews and focus groups for data collection and a phenomenological approach to data analysis will be used, demonstrating internal consistency with the epistemological and theoretical bases of the study. Semi-structured interviews and focus groups will be used for data collection. The interviews will be anonymised, audio recorded and transcribed. Transcribed data will undergo independent thematic analysis by two researchers. A phenomenological approach to data analysis will be taken in order to determine the themes characterising the lived experiences of the students in the areas of enquiry.

Results:
Results are not yet available. Data collection will be carried out in January 2019 with results available for presentation at ASM July 2019.

Discussion:
Discussion of the student experience of the practicalities of learning through continuity of patient contact, the perceived benefits and any barriers encountered will contribute to knowledge about the practicalities of implementing the LIC in the context of the NHS in a rural area. Further discussion will focus on how students' experience of the LIC is influenced by individual factors such as self-direction and self-efficacy.

References:
Transition to Clinical Learning in the MBBCh: Student perspectives
D Cole, F Teasdale, I John, J Hotham, J Green, R Goodfellow, S Riley, D Cole
Cardiff University

Background:
There are many transition points during a medical career. A significant transition occurs when students move from a predominantly non-clinical learning environment into a clinical learning environment. The literature and local experience has identified this as a period of stress and anxiety for students. Transition to clinical learning challenges students’ knowledge as well as skills such as time-management, team working and self-directed learning. Bordieu (2) noted that students have to navigate a new social structure and identify what capital is valuable to them in an environment where the patient is now the priority. The new C21 undergraduate medical curriculum in Cardiff aimed to reduce the pre-clinical/clinical divide with implementation of case-based learning, early years patient exposure (typically one day per week in years 1 and 2) and early training in clinical and communication skills. In year 3, students have longer 8-week clinical attachments. The aim of the project was to explore and define students’ experience and perception of the transition to clinical learning following implementation of the C21 curriculum, with the aim of informing further curriculum change to improve student learning and experience during this time.

Methodology:
Participants within the second and third year of the C21 curriculum were recruited via email. Semi-structured interviews were conducted in person using an Appreciative Inquiry approach (3) and audio-recorded. The recordings were transcribed and then analysed using a grounded-theory approach (3). Nvivo 11 was used for the analysis. The study was approved by Cardiff University School of Medicine Research Ethics Committee.

Results:
Several major themes that arose from the data. There was general consensus among students that C21 prepared them well for clinical placement; we noted that they did not encounter several transitional problems that are well documented in the literature (5,6), such as feeling they had an inadequate level of clinical skill. However, students did feel that they would benefit from further patient exposure, particularly towards the end of the 2nd year. The importance of ‘the peer-peer grapevine’ was apparent: this is the process whereby students glean information regarding clinical placement from their peers (7). We suggest this presents an opportunity to access the ‘grapevine’ more formally, for the benefit of all students, particularly those without access to a large peer-support network. Many students also confirmed that they still experienced stress and anxiety during the transition to clinical learning - nine sources of anxiety were highlighted. The final theme concerned being ‘part of a team’ which concerned the feeling amongst many students that they benefit most from clinical placements when their position within the clinical team is validated. We suggest that this could be addressed by integrating students into clinical work more fully and providing them with ongoing patient-care responsibilities appropriate to their stage of training.

Discussion:
Our curriculum is performing well in preparing students for clinical learning. C21 students do not appear to experience several of the sources of anxiety that are reported in medical literature (5, 6). Our study suggests opportunities to improve, including making more formal use of the ‘peer-peer grapevine’, increasing patient exposure towards the end of year two and increasing student involvement in the day-to-day work of clinical teams in providing patient care.

References:
A Journey to Define Professionalism for Pharmacy Students
A Kerr, T Pawlikowska, K Murphy, P Gallagher, J Strawbridge.
RCSI Dublin

Background:
There has been considerable debate about professional values and behaviours, but a professionalism definition has been difficult to encapsulate (1, 2). The Royal College of Surgeons in Ireland (RCSI) embarked on a programme of research to develop institutional profession-specific definitions of professionalism for all undergraduate students. The journey to defining professionalism for pharmacy undergraduates involved faculty, students, and external stakeholders.

Methodology:
A working group was set up in the School of Pharmacy with members of staff and the Vice Dean of Professionalism to develop a definition for pharmacy students. It was agreed that the RCSI medical professionalism definition was a suitable place to start. A series of focus groups was convened with pharmacy faculty, students, and external stakeholders to contribute to the refinement of the definition and generate a definition of pharmacy professionalism.

Results:
The definition iterated after each focus group. Students felt it was important to capture mentorship and equality as core professional values. The stakeholder focus group led to changing patient-centred care to person-centred care as not everyone a pharmacist encounters is a patient. The working group reviewed the iterations and finalised the definition.

Discussion:
Professionalism is a complex, multidimensional set of fundamental values. The journey to the final definition of pharmacy professionalism for pharmacy students was informed by students and external stakeholders.

References:
“Appropriate black humour... light at the end of the tunnel”: Considerations associated with the use of occupational humour in healthcare settings.

G Finn, L Aylott, O Coker, A Duenas
Hull York Medical School

Background:
Understanding occupational humour, or humour relating to one’s job, takes on new complexity for professions that deal with life, death, and illness. Medicine and other health professions are not immune to routine humour, although it is frequently expressed as banter and black humour, humour relating to subject matter that is normally serious or sad (1). Some studies have shown the frequent use of black humour in medicine as essential coping, and to have unspoken ‘rules’ that dictate the appropriateness and professional perceptions of such humour (2, 3, 4). But overall there is a paucity of research regarding humour and its use in healthcare settings, or the implications humour may have in regards to professional practice and training. This study aimed to better understand views on humour in health care settings.

Methodology:
Following ethical approval, this qualitative study utilised two datasets relating to professionalism and professional identity. Dataset 1 sampled healthcare professionals working in mental health service NHS partners. Data were collected via 6 focus groups, with a total of 43 participants: 4 pilot participants, 5 carers, 10 nurses, 10 occupational therapists, 7 psychiatrists, and 7 psychologists. Dataset 2 utilized focus groups of medical students and semi-structured interviews with faculty members at one UK medical school. There were 8 faculty participants, and 23 student participants (9 pre-clinical, 14 clinical), across 5 focus groups. In total there were 74 participants. Discussions were recorded, transcribed, and analysed using thematic analysis. Sections with humour identified as a topic of discussion were isolated and more closely examined to identify specific sub-themes.

Results:
Three major themes emerged from the data: coping, situation and educational qualms. Almost all participants agreed that humour (even black humour) was an essential method of coping with the difficulties of working in the health professions. Even students, who admitted limited personal experiences utilizing humour, believed it to be an eventual normal reality of their work. But coping had some overlap with the theme of situation; using humour to cope was viewed as only professionally and ethically appropriate in certain situations. Notably, who was initiating and where humour was utilized were key in humour being viewed as an effective means of coping or team morale boosting. Lastly, some educational qualms surrounding black humour and banter in the healthcare setting also arose as a theme. Participants had varying views on humour as a potential form of hidden curriculum of healthcare. Many participants grappled with the quandary of ‘do as I say, not as I do’ with instructing students and new trainees on the ethics and professional concerns surrounding humour, compared to what may actually be experienced in practice.

Discussion:
This study provides support that occupational humour is frequently considered a gray area of professionalism, with an associated blurred hidden curriculum. The data generally matches other study findings - humour is typically viewed as vital to health professions coping, but is rarely openly discussed. The general agreed upon rules relating to humour are never explicitly communicated, and often understood as an individual experiences more time in practice. We recommend further, more focused research relating to humour in health care settings. Based on our findings, such research should be advanced to better understand how humour is utilised by various specialities, and in cases when humour is not utilised, what other forms of coping might be used instead. Further, understanding how to more directly discuss and educate trainees about black humour and banter may help ease out-group to in-group transitions for students in clinical practice. And lastly, humour is a rather universal, while complex, subject matter; so is healthcare. Understanding public and patient views on humour might better medicine and healthcare as a whole.

References:
Embedding a culture of clinical governance that prioritises patient safety in final year undergraduate medical students at the University of Bristol


University of Bristol

**Background:**
In 1998 a vision for clinical governance was set out to safeguard high standards of patient care (1). The primary focus was to make National Health Service (NHS) organisations accountable for improving their service and creating an environment in which clinical excellence can flourish. Whilst this has resulted in changes to management structures and clinical practice, it is unclear whether an appreciation of clinical governance has filtered down into medical education. There is no clear evidence on whether medical students, who will be the next generation of doctors driving change, understand key principles of clinical governance.

**Methodology:**
We have developed a novel teaching programme for final year students designed to promote a culture of clinical governance, which prioritises patient safety as its foremost concern. An 8-week teaching programme will be delivered, consisting of weekly talks from current junior doctors. These will describe difficult clinical situations which they have faced and relate them to patient safety and clinical governance. The junior doctors are based in a mixture of tertiary centres and district general hospitals, and each week a different hospital hosts the talk. The session itself will be delivered throughout the Severn Deanery using the Microsoft-HUB. A questionnaire was sent to all final year medical students at the University of Bristol, which aims to assess their understanding of clinical governance in advance of the teaching programme. The same questionnaire will be sent to the students at the end of the programme to assess if there has been a change in their appreciation of the importance of clinical governance. Additionally, each individual session will be evaluated by a student feedback questionnaire.

**Results:**
The 8-week programme of teaching is due to start on 16 January: therefore, no results are available at time of writing. We plan to provide an account of how well students understood the concept of clinical governance prior to and after the programme. Furthermore, we will describe the students’ perception on how useful they thought the sessions were and whether it was likely to influence their clinical practice.

**Discussion:**
Clinical governance is not a top-down compliance issue; rather, it is an important practical issue that impacts patient safety. All professionals in the NHS should understand and contribute to it (2). However, its introduction to healthcare structures has not been matched by changes to undergraduate curricula and it is unclear whether medical students are aware this philosophy that has shaped the modern health service. We believe that our teaching programme encourages students to consider the values and principles of the NHS which prioritise patient safety, and is intended to better prepare them to work in and advance healthcare. The junior doctors’ open and personal reflection on challenging clinical situations, will foster a blame-free culture and encourage discussion around errors and failures, which will in turn enable learning and quality improvement. The overall ambition of the programme is to play a role in improving patient safety.

**References:**
Examiner bloopers - Changing Behaviour in Undergraduate Clinical OSCE’s
J Acheson, R Westacott
University of Leicester Medical School

Background:
Medical Students at the University of Leicester reported that the behaviour of some examiners affected their performance in the 2016 and 2017 Year 4 Intermediate Professional Examination (IPE) and the Year 5 Final Professional Examination (FPE) OSCE circuits. To address these student concerns the Assessment Team designed and recorded a series of examiner bloopers to raise awareness of poor examiner behaviour during the clinical OSCE’s.

Methodology:
Eleven examiner bloopers were designed, storyboarded and recorded in May and June 2017, which were based on actual events over the previous three years. The Google form training package was subsequently emailed out to all 2018 FPE and IPE OSCE examiners a week before the 2018 exam diet. Topics included mobile phones, comments after the station, arguing with the simulator, being late, sleeping, exasperated and leading, interfering, missed timings, idol talking, prompting and teaching. The Google form recorded the examiners name and whether they had confirmed they had watched all eleven videos. As in the previous two years, the students had the opportunity to discuss and report any examiner behaviour concerns with the Assessment Team after each session at the 2018 IPE and FPE OSCE’s.

Results:
45% of the examiners at the 2018 Year 4 and 5 clinical OSCE’s viewed the videos prior to examining, however we did observe a reduced number of reported examiner behaviour concerns from the students. In total there were 9 reports in 2018 compared to 17 in 2016 and 42 in 2017. This represented a 48% reduction when compared to 2016 and a 79% reduction when compared to 2017. The largest reduction in 2018 was in examiners who interrupted the students (95%), however the largest reported concern in 2018 was mobile phones ringing (33%), which was a similar number when compared to 2016 and 2017.

Discussion:
Raising awareness around poor examiner behaviour is an important issue and one that students are concerned by. This novel approach may have influenced examiner behaviour as although only 45% of examiners watched them they were aware that they existed. A verbal one to one check will be conducted with each examiner prior to the 2019 OSCE circuits commencing to ensure their mobile phones will not ring. The bloopers videos are being used for all new examiners who are being trained on a yearly basis and they continue to be sent out to every examiner a week before each clinical OSCE in 2019.
Background:
Under the Equality Act 2010 the University has a general duty to eliminate discrimination, to promote diversity and to encourage good relations between the diversity strand (protected characteristics). The GMC has identified four priorities for work on equality, diversity and inclusion up to 2020. As LGBT (Lesbian, Gay Bisexual, Transgender) Youth Scotland champions within Dundee’s UG Medical School, the authors wished to collect information around the attitudes to and experiences of gender-identity and sexuality diversity of our MBChB students. We also wanted to compare with results of a similar survey run in 2011.

Methodology:
The 2011 questionnaire was modified to reflect changes to the University structure and guidance from the Equality Network re. nomenclature relating to gender identity and sexuality. Ethical approval was received from UoD, and submitting the questionnaire assumed consent. All MBChB students were invited by email to complete the online anonymous questionnaire during February 2018 (LGBT+ history month). 1 reminder was sent out on Purple Friday (LGBT+ awareness day). Analysis was via Excel, and free-text was coded using thematic analysis.

Results:
There was a 15% (n=128) response rate which was fairly evenly distributed across the years. With respect to gender: 87 students identified as cis-female, 37 students as cis-male, 1 as trans male, 1 as non-binary and 2 in another way. Both ‘in another way’ said they would not use cis, something also highlighted by 3 who had selected a cis option (2 cis female and 1 cis male). With respect to sexuality: 1 identified as bisexual, 9 as bisexual, 98 as heterosexual, 12 as homosexual and 8 in another way. Significantly more students identifying as LGB+ would be worried if some or all of their contacts knew of their sexuality. Although some heterosexual and LGB+ would like to be involved in the University LGBT+ group, half of LGB+ said they would be worried to attend in person. Students were more than twice as likely to have suffered harassment due to their sexuality. LGB+ students were twice as likely to have observed / experienced bullying due to LGBT+ identity. The majority of detailed cases were about language used, rudeness and homophobic jokes. Some students talked about offensive behavior of others during and after LGBT+ sessions. Current initiatives mentioned included non-gendered toilets, the LGBT charter, LGBT month events, safe spaces for discussion, and inclusion in the curriculum. However, one student was less positive. Priorities for future work included decreasing stigma, educate lecturers / professionals, and continuing inclusion in curriculum.

Discussion:
The increase in response rate for 2018 over 2011 may reflect the introduction of the LGBT+ charter in the medical school with highly visible champions; more awareness and acceptance in society generally; and promotion of LGBT+ History Month including Purple Friday. However, taking part in these events without an obvious link to action may result in a negative attitude to such events. Harassment due to sexuality is much higher in LGB+ students than heterosexual students. This may also explain their heightened awareness of homo / bi / transphobic episodes. It is important we sensitise all students and staff to these unacceptable behaviours and the potential effect they have on the LGBT+ community. This is important not only to them as students, but also as future health professionals. Of particular interest was the students who voiced objection to being labelled cis. This was an addition to the 2018 survey, and shows the power of a label. By giving students only the options of cis, trans, non-binary or ‘other’ we were encouraging cis students to experience labelling in the same way the trans community are labelled.

References:
Look After Your Mate: Supporting First Year Medical Students
S Lynch, D Rose
St Andrews

Background:
When medical students experience challenges or mental well-being difficulties they will often approach their peers first (1), both as a source of support and for help gauging whether they need to seek out more formal guidance (2). Despite this, medical students aren’t routinely provided with guidance on how to balance supporting and signposting their peers, while maintaining healthy boundaries with them and looking after themselves. The Look After Your Mate (LAYM) workshop was developed by the UK student mental health charity, Student Minds. The workshops are approximately 2 hours long and are run by facilitators from a variety of professional backgrounds, who have attended their one-day training course. The LAYM workshops were run in groups of approximately 20, facilitated by student-minds trained staff from the Southampton University Student Union. The workshops were included in the timetable and were staggered over a two-month period. Student Minds state that the workshops aim to:

• Increase knowledge and understanding of what mental health is, the difficulties faced and the support available.
• Increase the skills and confidence required to support a friend who is experiencing difficulties
• Increasing knowledge of your own well-being and how to look after yourself.

The LAYM workshop was introduced to the entire year 1 cohort of Southampton Medical School students on the direct entry BM5 programme as part of the Personal Professional Development curriculum. We will report here on student perceptions of the workshop and its usefulness.

Methodology:
Students were invited to provide anonymous feedback at the end of the workshop. Students were asked to answer questions on a Likert scale of 1-5 regarding the perceived usefulness of the workshop, with 1 being useless and 5 being useful (no anchors on points 2 - 4). Students were also given free-text space to comment on how the workshop could be improved, which aspect they found most helpful, and what they will do differently following the workshop. Frequencies were obtained for the Likert scale and a thematic analysis of the free text comments was conducted.

Results:
A total of 189 of 245 first year BM5 students attended the workshops and provided feedback. Of these, 177 students provided free text answers. Most students found the workshop useful, with only 1 student reporting that they didn’t find it helpful. From the free text comments, it was clear that students valued the session as it was, with suggestions for improvement focusing on the timing of the workshops, with mixed feelings regarding the length. In terms of reporting what was most helpful, different students highlighted different aspects of the workshop. Some felt that the guidance on signposting and initiating conversations was most helpful, while others highlighted other aspects, such as the role-play activities, discussion regarding boundaries, and material on empathy. Several students highlighted the listening activity as the most helpful part of the workshop for them. Again, there was variation on what, if anything, students reported they would do differently following the workshop. Students mentioned setting boundaries, listening, asking more open-ended questions, signposting students to professional services and ‘looking out for their mates’.

Discussion:
The LAYM workshop was well received by students and was accepted as a useful and helpful part of the curriculum. Students are not always eager to participate in sessions which they perceive as focusing on student support, so this is encouraging and may be of interest to other medical schools. There was variation in which aspects of the workshop students reported as being particularly helpful, as well as variation in what they intended to do differently after the workshop. It appears to be a useful addition to the curriculum, providing an accessible and meaningful way for students to discuss how they take care of themselves and support their peers.

References:
Medical Students Raising Concerns about Staff Members
K Ahmed, A Kakkar, D Lynch
East Lancashire Healthcare Trust

Background:
Raising concerns is a fundamental responsibility of professional medical practice [1] & plays an important role in ensuring patient, trainee, staff & organisational safety. The Francis Report [2] & Bawa-Garba case highlight the importance of trainees being empowered to raise concerns. Medical undergraduates are doctors in training. Education & training around raising concerns is a vital part of their professional development. Medical clinical educators [MCE] also act as role models for their students. There are occasions when MCE act unprofessionally. Anecdotal evidence suggests there are barriers to medical students raising concerns in such instances. Very little is published about these perceived barriers. Lastly, there is little published experience around supporting undergraduate clinical educators dealing with concerns raised about them.

AIM
1. Obtain feedback from students & MCE about the current “Raising Concerns” process at ELHT Department of Undergraduate Education
2. Identify features of a process to support students raising concerns
3. Identify features of a process to ensure MCE support when a concern is raised about them
4. Use the findings to develop an effective “Raising Concerns” system for students & MCE alike, which is supportive & enables self-reflection & learning.

Methodology:
An anonymous online survey comprising multiple choice & white space questions was developed & sent to clinical students attending ELHT from Lancaster & University of Central Lancashire (UCLan) Medical Schools & ELHT MCE. Questions related to barriers facing medical students when raising concerns about MCE & when developing a specific process what the important features of this would be. The responses were used to develop a specific “Raising Concerns - MCE” flowchart to support students and educators. This was then implemented as a pilot.

Results:
Of 26/79 MCE responded (34% response rate). 5/26 were aware of incidents of concerns about staff members reported by medical students of which 3 were directly involved. Of the 66 UCLan & 84 LMS, 49 students responded (33%). 13/49 were aware of, & 7 were directly involved with, such incidents. The results confirmed the findings of previous work on barriers facing students [3] namely: fear of repercussions; undermining hierarchy; unsure of the process involved; and the perception that nothing would be done about it. There was scope for improvement in all cases that had arisen previously. Both MCE and students agreed the need for a consistent and systematic process (92% & 96% respectively). The suggestions from both groups as to what features a proposed system should have were identical namely it should be fair, timely, supportive & feedback incorporated for both the student & MCE.

Discussion:
SUMMARY & CONCLUSION
Concerns raised about MCE must be dealt with promptly & sensitively in order for both parties to understand & reflect on the circumstances leading to that complaint. The process we have developed was designed in response to feedback from students & MCE. It is timely with an aim to deal with the issue within 2 weeks. To address student worries about how to raise a concern, issues with hierarchy & the possibility of repercussions, we created a clear, consistent & fair framework which supported both parties. To aid learning, understanding and self-reflection the process incorporates detailed feedback for both parties. A further QIP studying the usefulness of this new system is currently being developed.

References:
Pharmacy Students' reflections on professional values
A Kerr, T Pawlikowska, F Boland, J Strawbridge
RCSI Dublin

Background:
Professionalism is a difficult concept to pin down and the need for an explicit professionalism definition has been identified (1,2). This study sought to develop a view of professionalism from the perspective of pharmacy students as part of an RCSI-wide research study.

Methodology:
A cross-sectional questionnaire study design was utilised. The questionnaire was adapted from the Professionalism Mini-Evaluation Exercise (3) tool developed at McGill University. Students reflected on their perceptions of the importance of the behaviours listed in the questionnaire. All undergraduate pharmacy students (n=199) and pharmacy interns (n=166) were invited to participate in the study in January 2016. Undergraduates were recruited during teaching and pharmacy interns were recruited online. Frequencies and percentages of responses were calculated and distributions of responses compared using appropriate non-parametric methods.

Results:
There was a good response rate with 94.5% undergraduate students responding and a predictably lower response rate of 30.7% of pharmacy students responding online. Overall, pharmacy students appreciated the importance of the professionalism attributes. However, attributes such as accepting inconvenience to meet patients and advocacy were ranked slightly lower in importance. There was no evidence of significant differences in scoring of behaviours between gender, year groups and whether or not the students had a healthcare professional in their family.

Discussion:
This study illustrated that pharmacy students appear to recognise the importance of professionalism attributes. Trend results indicated some complexities, such as the balance between altruism and self-care. Further qualitative research is merited to explore the complexities and interpretations of some behaviours.

References:
Professionalism across the professions
E Smyth, H Lechleiter, A J Saris, R Hession, M O Shea, T Pawlikowska
RCSI

Background:
One of the objectives of medical education is to develop a sense of professional identity in learners and it is generally believed that enculturation of values and attitudes can successfully underpin professional behaviour. Professional identity can be developed on different levels, for example as an individual or as part of a larger group. However, professionalism is not unique to medicine and we believe that important information about the development of professional identity and in the underpinning teaching strategies can be learnt by looking at professionalism in different contexts. Currently it is unclear as to what are the experiences and influences that help form this identity and what are effective strategies to support the development of professionalism: comparing what underpins professionalism across professions may help to elucidate this. The aim of this study is to explore the experiences, attitudes and behaviours that contribute to the development of professionalism and professional identity in different professional groups.

Methodology:
A qualitative research approach was employed and conducted from a constructivist perspective. Data was collected in digitally recorded focus groups comprising of heterogeneous groups of stakeholders in the areas of medicine, law and academic teaching. Focus group discussions were fully transcribed and analysed using inductive thematic analysis to identify the emergent themes.

Results:
20 subjects participated in 4 focus groups. There was a consensus between the professions that importance is placed on professionalism in most contemporary professional education however, professionalism is a difficult subject to teach explicitly and that most individuals learnt through observation of peers and seniors, role modelling and following a code of conduct or professional guidelines. The initial emergent themes were: power balances between the professionals and their service recipient (client or patient); professionalism in practice; the role of context; role modelling; observational and experimental learning; confidentiality; the function of generation in the experience and teaching of professionalism and the perception of professionalism in other professions.

Discussion:
The journey to professional identity is unique for individuals within and between professions. There are similarities and differences between how professionalism is perceived across the professions and each profession has its own challenges to professional behaviour. Similarities existed between the strategies to teach professionalism. Differences occurred between the professions in the influence of culture and context on professional behaviour. Further research with ‘newer’ professions such as social work and IT, may provide a deeper understanding of the attitudes, behaviours, and characteristics that contribute to the development of professional identity.
Professionalism

The tattooed doctor An exploration of the perceptions of medical students and medical school staff
K McConville, B Callaghan
University of Dundee

Background:
The way in which one perceives a tattoo has the potential to alter their perception of an individual. With tattooing becoming a more mainstream practice over the last 40 years, there has been an increased interest in studying the patient perception of tattooed healthcare providers. This study marks the first time medical students and medical school staff have been afforded the opportunity to express their opinions on this topic. The professionalism of a tattoo has not been defined by the General Medical Council (GMC), therefore this topic becomes complex, so this study seeks to enlighten as to how one can balance their professionalism against their personal identity.

Methodology:
A case study approach was utilised to facilitate the exploration of medical student and medical school staff perceptions towards tattoos. Focus groups and semi-structured interviews were used as data collection methods for students and staff, respectively, before undergoing thematic analysis by means of Braun and Clarke’s six-stage analytical framework.

Results:
Medical students and medical staff had broadly similar perceptions of tattoos with both cohorts focusing a significant amount of attention to the depiction and location of them. Four main themes were identified related to the student and staff perceptions of tattoos, being: the nature of tattoos, professionalism, freedom of expression and generational perceptions.

Discussion:
The depiction and location of the tattoo were discussed as being important factors in forming the perception of a tattooed person amongst both cohorts. Certain depictions and locations were described as inappropriate for medical students and doctor’s alike and therefore highlights the potential for the creation of legislation to mitigate these. Whilst both cohorts acknowledged a shift in tattooing practice to a more mainstream culture, students conveyed that it still not the norm for a doctor to be tattooed, hence creating a potential challenge for communication and the development of the doctor-patient relationship. Both staff and students expressed the value of allowing doctors and medical students freedom of expression. Nevertheless, for this to take place, it is recommended that students engage in reflection of their professional identity before modifying their personal identity such that the two become incongruent with one another. The concept of generational perceptions applies to both participant groups acknowledging the shift in tattooing culture but also how their opinions have changed simultaneously. Specifically, staff expressed their change in opinion from a medical context based on interactions with tattooed patients.

References:
2. Yin RK. Case study research: design and methods. 5th ed. USA: SAGE Publications Ltd. 2014.
Stitch-Up! A Free and Accessible Basic Surgical Skills Course
C McNeill, M Wijeyaratne, N Condie, J John, J French, N Cook, O Brown
Taunton & Somerset Foundation Trust

Background:
Undergraduate and Foundation trainees face a paucity of operative surgical exposure, with medical students reporting negative experiences in the operating theatre due to lack of preparation, ‘intimidation’, and an undefined role in the surgical team (1, 2). Demands of service provision have also limited opportunities for junior doctors to obtain hands-on exposure (3, 4, 5). The recent reduction in numbers enrolling for higher surgical training may reflect a lack of inspiration to pursue a surgical career (6, 7). The current method to gain formal training in basic surgical technique is the £670.50, two-day Royal College of Surgeons Basic Surgical Skills course which may require study leave provision (8). The free “Stitch-Up!” Surgical course was initiated in 2016 in Bristol and aimed to educate junior doctors for their surgical rotations. The course objective was to enhance exposure to basic surgical skills, and improve confidence among medical students and Foundation doctors. We aimed to fill the gap in surgical exposure and inspire junior doctors to consider formal training and a surgical career. Our objective was to promote competence, confidence and satisfaction in the surgical experience among junior doctors.

Methodology:
We formed a committee of enthusiastic junior doctors involved in the planning of a series of training events. As a team, we recruited a consultant surgeon in each centre to oversee each course. We developed pre and post course surveys focused on confidence performing basic surgical skills expected of a junior doctor. These included, surgical hand-tying, basic suturing techniques (interrupted, mattress, subcuticular, deep dermal), and basic laparoscopy (thirty minutes each). A standardised list of intended learning outcomes was made for each station. The surveys also included questions regarding how integrated delegates felt in the surgical team, before and after the course. Experienced faculty was sought by contacting Surgical Registrars and Senior House Officers at each hospital. A list of committed faculty members from the Severn Deanery was formulated and matched to stations they were confident in teaching. The optimal number per station was determined as 5 per group with a trainer: trainee ratio of 2: 5. The courses were advertised to delegates through posters and trust and deanery-wide emails. A set of core technical resources was formulated, and sourced by the respective committees for each course through each hospital academy. The standard free of charge, two-hour workshop was run in different venues in the Southwest. Delegate feedback was given for individual stations regarding the respective faculty. Course centres included Bristol Royal Infirmary, Musgrove Park Hospital (Taunton), and Weston General Hospital. The number of faculty and attending delegates from each hospital was recorded, and data from the pre and post course delegate surveys were analysed using paired student t test.

Results:
Five courses have been conducted since November 2016, involving 84 delegates - 34 F1s, 12 F2s, 33 Medical students, 5 ‘other’. Pre- and post- course survey for respective course iterations showed a highly statistically significant increase in technical confidence (p<0.001) in all trained skills. While there was a statistically significant increase in feeling to be ‘part of the team’ after the course (p 0.05).

Discussion:
Standardised multi-centre data from five iterations of “Stitch-Up!” demonstrates a consistent improvement of juniors’ confidence in technical ability, and their sense of integration within a surgical team. This forms the basis for our future goals to continue developing the “Stitch-Up!” brand nationwide, and make a positive impact for junior doctors and basic surgical training.

References:
Evaluating an Online Training Package for MMI Interviewers
C Taylor, D Jackson, A Spruce, J C Agwu
University of Birmingham

Background:
The Multiple Mini Interview (MMI) is used as a selection tool by many medical schools. Inter-station reliability for MMI is reasonably high, (0.59-0.87)(1). However, inter-rater reliability is lower with coefficients of 0.41-0.69 (2, 3). It has been suggested that Interviewer Training is an area for development to improve the inter-rater reliability of the MMI. In response to this, an online training package was developed for MMI Interviewers at the University of Birmingham; compulsory for all new interviewers (NI), and strongly encouraged for existing interviewers (EI). The training provided an overview of the selection process, how to facilitate an MMI station, how to spot a good candidate, understanding the mark sheet and raising awareness of unconscious bias. Using Kirkpatrick’s hierarchy as a guide (4), the aim of our study was to evaluate the engagement, feasibility, acceptability, satisfaction and self-reported improvement in knowledge after interviewer training.

Methodology:
Engagement with the training was estimated by reviewing the time spent on the training package, with at least 30 minutes considered to suggest sufficient engagement with the content of the package. All those completing the package were then invited to complete an online survey. This invited participants to rate their views on various elements of the training on a 5-point Likert scale, with options for free text responses. Descriptive statistics are provided to outline the survey findings, alongside thematic analysis of the free text comments.

Results:
239 interviewers registered for the online training package within the study time limits. 171/239 (71.5%) were considered to have engaged sufficiently and 124 completed the online survey. Of those who did not engage, 100% were EI's. Of the survey respondents, 55% were male (modal age group being 40-49 yrs) and 58.3% were NI's. 99.1% of interviewers would recommend the training package to other MMI interviewers, 91.9% thought that the training course was feasible, and 97.6% thought it was relevant. 83% enjoyed the process overall, with a significant difference in responses between NI's and EI's in this area (91%, compared to 78% respectively, p=0.04). In the majority of sections within the training, there was no significant difference in responses between NI's and EI's. However, the video section on spotting a good candidate was enjoyed by 97% of NI's compared to 84% of EI's (p=0.01), and the section on using the mark sheet was found to be useful by 98.5% of NI's compared to 90% of EI's (p=0.04). Of the EI's, 78.1% said they would make changes to the way they facilitated an MMI station. NI responses were very positive, with 86.7% feeling more confident in managing their own unconscious bias; 92.9% more confident in using the marksheet and 96.4% more confident when aiming to facilitate and not prompt. Using data from freetext comments, the interviewers found the online format helpful as they could pause and resume learning at a later stage. Technical difficulties were cited by some participants, illuminating areas for development, such as improving the audio quality of some of the videos

Discussion:
Almost all interviewers would recommend the training package, and both NI’s and EI’s benefitted. The overall satisfaction, feasibility, acceptability and self-reported learning suggests a case to make this training compulsory for all interviewers at the university. The differences in experience between NI's and EI's may offer some scope to develop the sections on ‘understanding the mark sheet’ and ‘spotting the good candidate’ for each group. The package was tailored to the MMI process at the University of Birmingham, but represents many of the principles of MMI assessment. Other institutions may therefore benefit from implementing similar online training. Further work is required to determine whether inter-rater reliability improved after the course.

References:
How do Lincolnshire science teachers view their role in helping students from under-represented backgrounds get into medical school?
R Cullum, H Kingsnorth, S Gay
University of Nottingham

Background:
Students from deprived areas of the UK are much less likely to apply to medical school than those from more affluent parts of society(1). In spite of much work nationally to attempt to improve this, the situation still lags behind Government targets with medical students being over four times more likely to have been educated privately, and 80% of medical students coming from only 20% of schools nationally(1,2). One of the challenges facing medical schools is that this is not just because students from under-represented backgrounds are unsuccessful in applying, but it is an issue that they don’t apply in the first place(3). There is also great diversity in how medical schools employ the task of widening access, including a wide variety of approaches to engage with local students and schools, with many of these approaches having limited evidence base(2-4). It is well known that school teachers can play a significant role in the future career destinations of their students(5). Students are more likely to discuss career aspirations with teachers in a relative field, for example - students interested in applying to medical school are more likely to discuss this with a science teacher(6). Additionally, a high proportion of schools in Lincolnshire are not engaged with medical schools(4) and hence a student’s only source of information may be school staff, further enhancing their influence. This project seeks to explore secondary school science teachers’ perspectives on careers advice to students who are capable of making applications to medical school and factors which might have contributed to these perspectives. It is anticipated that this will help to better inform future interventions intended to improve applications to medical school from students from underrepresented backgrounds.

Methodology:
Schools with higher levels of deprivation in Lincolnshire were identified using the index of multiple deprivation(7) and government data regarding pupils receiving free school meals(8). Science teachers from these schools were approached by email asking them to take part in a semi-structured interview. A sample size of up to ten teachers from a geographical spread of the county is currently being organised for semi-structured interview. Transcripts will undergo thematic analysis by two independent analysts and will be reconciled using the constant comparative method to identify themes around the teachers’ experiences of giving careers advice to students either applying to medical school or who were capable of applying.

Results:
Interviews are scheduled to take place in late January and February, and full results will be available for presentation at the ASM.

Discussion:
It is anticipated that study data will provide a novel perspective on some of the challenges young people from under-represented backgrounds face when applying to medical school, and so will help inform additional new approaches to take when seeking to improve the number and quality of applications to medical school from these groups.

References:
Medical School choices and selection outcomes in the UK: a retrospective study using administrative data
D Harrison, K Woolf, G Wyness, C McManus
UCL

Background:
Medical school selection is a crucial determinant of the UK medical workforce. Selection is highly competitive and applicants from non-traditional backgrounds are less likely to get an offer. Increasing the number of doctors from non-traditional backgrounds is a priority; but the evidence for how to achieve it is relatively poor. Some medical schools attract and/or accept considerably more non-traditional applicants than others,(1) which may contribute to the substantial variability in medical graduate outcomes.(2,3) In higher education generally, students from deprived backgrounds attend less selective universities with knock-on effects post-graduation, but it is uncertain how much this is driven by applicant choices and how much by selection methods.(4) Research typically examines selection methods, but understanding how applicant choices affect outcomes is also needed; as one admissions dean put it, “we can only select from those who apply”.(5) Our study asks: Which applicant and medical school factors predict the medical schools applicants apply to? Do applicant choices mediate the relationship between social background and likelihood of getting an offer?

Methodology:
Students apply to UK medical schools in the autumn for entry a year later. They mostly have not yet taken their final school examinations (typically A levels in England, Wales and Northern Ireland); offers being made on predicted A levels, interviews, personal statements, and - since the 2000s - aptitude test scores. Dataset 1: applicants to 5 of 27 UK medical schools for entry in 1996 & 1997 who had taken 3 A levels. Includes applications, offers, socio-demographics and A-level grades. Data provided by UCAS. See (6). Dataset 2: applicants to up to 4 of 36 UK medical schools between 2007 & 2017. Includes applications, offers, acceptances; socio-demographics; academic attainment (predicted school-leaving grades and aptitude test scores). Data obtained from the UK Medical Education Database (www.ukmed.ac.uk) in March 2019 (project: UKMEDP89). Results are presented for dataset 1; dataset 2 results will also be presented at the ASM. We use statistical modelling to estimate:

- probability of getting at least one offer (vs not), given medical school choices, attainment and socio-demographics. In dataset 2 we will also look at the probability of more than one offer, and offer acceptance.
- probability of application (vs none) to each medical school in terms of attainment and demographics, as a function of medical school prestige (average A level points of applicants to a school).

Funding: Woolf and Harrison are funded by an NIHR Career Development Fellowship. This report presents independent research funded by the National Institute for Health Research (NIHR). The views expressed are those of the author(s) and not necessarily those of the NHS, the NIHR or the Department of Health.

Results:
Of 10 179 applicants, 38.9% received no offers. Offers were strongly influenced by A levels, but high points did not guarantee offers. Offers were more likely for those from higher socio-economic backgrounds, younger, white, and women. They had higher A levels, but medical school choices also played a part. The benefit from good medical school choices was higher in those from lower socio-economic backgrounds, white applicants, women, and mature applicants. Applicants with higher grades applied to higher reputation schools (r=.37), but very high A levels scorers applied to low reputation schools and vice versa. High reputation schools were chosen more by higher socio-economic groups, white applicants, and younger applicants. Applying to schools with a wide range of reputations resulted in a higher offer likelihood. Applicants from social class 1, younger applicants, and men had higher ranges.

Discussion:
In the 1990s medical school choices influenced offers, which may partly explain different success rates of different social groups. At the ASM we will compare with more recent cohorts.

References:
Widening access to medical school: Looking at the impact medical student-run interview courses have on confidence and breaking down barriers
R Flynn, S McNeill, J Wright
Queen's University, Belfast

Background:
swotUP is a student society founded by medical students which aims to widen access to medicine by running interview courses for school/graduate applicants. This study focuses on how the courses affect students’ knowledge of the application process and confidence in their interview technique as well as looking at difficulties/stresses faced when applying to medical school

Methodology:
This study included school students aged 16-18 (n=96) who attended a swotUP interview course. Attendees filled in a questionnaire before the course began, addressing their understanding of the application process and confidence dealing with ethical dilemmas, multiple mini interviews (MMIs) and traditional interviews as well as exploring any difficulties or disadvantages the students had faced so far in the process. After taking part in MMI, traditional interview and ethical workshops led by medical students, attendees completed another questionnaire, seeing how the course had affected their confidence/perceptions.

Results:
The course increased average awareness levels of the application process and confidence of medical school acceptance as well as increasing confidence in MMIs, traditional interviews and ethics. The majority of students surveyed said they found the application process stressful and they felt they were under additional stress compared to their peers applying to other degrees.

Discussion:
The study showed the courses were helpful at increasing students’ confidence levels however some still felt at a disadvantage due to financial/social barriers. In addition to running further courses, we have launched a blog to help address these issues.
Addressing the Clinical Informatics Gap in Medical Education: a regional approach
O Arogunmati, J Davison, A Williamson, N Kumar
Health Education England working across North East and North Cumbria

Background:
Information Technology is set to change the way we work in healthcare in the United Kingdom with increased government focus and investment in this area reflecting commitment to change. Walpole et al (2016) have already highlighted a gap in medical education - recommending a need to address the role for national guidelines and further research in the area of curriculum development (in line with the growing prominence of informatics) (1). By extension, there is also a role for workforce development and education. As a result of plans to empower the workforce of the future there have been reviews commissioned into workforce development (such as the Topol review) (2). General health outcomes are relatively poor in the North East and North Cumbria compared to other areas of the United Kingdom (3). Supporting doctors in training to develop information technology skills should equip them to effectively utilise digital health solutions to improve patient outcomes and reduce inequalities in health. In NHS organisations in England (as well as other devolved nations) there are formal roles such as Chief Clinical Information Officer. We wish to understand what preparation would be required for doctors to be able to fulfil these roles for the NHS in the future.

Methodology:
An online survey (1,4) which was distributed to doctors in training within the Northern Foundation School for a period of 6 weeks to understand their awareness of clinical informatics and learning opportunities in clinical informatics. Survey findings will help create the groundwork for learning and development materials to improve workforce knowledge and skills. Ethical approval was sought but was not required.

Results:
95 responses from 815 doctors in foundation training were received via the online survey. A low level of awareness (38.9%) was reported amongst doctors in foundation training of clinical informatics in clinical practice. A significant proportion of respondents (76.8%) feel there is a function for clinical informatics for roles of doctors in training with only 5.3% feeling very confident with their skills in clinical informatics. 95.8% of respondents had not had any specific training in this area and 93.7% were willing to participate in a regional clinical informatics training if it was available. Quality Improvement, e-health - the future direction of clinical care and communication & information transfer were the three most highly rated areas that respondents would like to have covered in a generic informatics module if available.

Discussion:
This survey highlighted a lack of awareness and the need for information technology training in doctors in foundation training. From the preliminary review, there appears to be a favourable disposition towards having generic clinical informatics training that address the selected areas of priority. The next steps are to explore in greater detail through focus groups specific learning needs and preferred teaching methods to produce a local strategy aimed at creating, implementing and evaluating a prospective regional clinical informatics teaching module to support doctors in training regionally.

References:
Developing an airways skills workshop for foundation doctors and medical students
S Perry, J Barnes
Great Western Hospital

Background:
The ability to manage a compromised airway is an essential skill for all new doctors, as evidenced by the inclusion of basic airways skills in the foundation programme curriculum(1). It is also essential for doctors to be aware of advanced airway options and when to call for help. Discussion with senior undergraduates and foundation doctors in our trust suggested a paucity of knowledge in this area. In response to this we conducted a formal survey to assess confidence in this area and desire for further teaching. Following a positive response we developed a novel airway skills evening. We employed a simulation based teaching style as this has proven validity and effectiveness for airway management teaching(2), including when used for teaching undergraduates(3).

Methodology:
We conducted our initial survey using an online survey tool (Surveymonkey®). We sent it to all foundation doctors in our trust, simply asking if they felt they needed more training in basic airway management, and if they would find a hands-on training session useful. Following this we developed a pilot session, which was run in late 2018. The workshop was three hours duration and comprised a brief introductory talk, followed by hands-on, small group (two to three participants) sessions covering airway management. The focus of the session was on basic manoeuvres including opening the airway, suction, and simple adjuncts, and touched on more advanced techniques including supraglottic airway insertion and intubation. The session was advertised and ticketed using an online application (Doodlepoll®) and feedback collected using an online survey tool (Surveymonkey®). Feedback comprised visual analog scales (VAS) of pre and post course confidence (from 0-100, “very unconfident” to “very confident”) and free text questions on course delivery. A VAS scale was chosen to assess pre and post course confidence as this is in line with other similar programmes in the literature(4,5). The stations were taught by trainees and consultants in anaesthesia. Places were limited to 10.

Results:
From the initial survey 27 out of 34 doctors replied, with 26 (96%) stating that they felt they would benefit from further training in this area. The pilot session was trialled with foundation doctors. It was fully booked within the first few hours of going online. 10 candidates attended the pilot session, with seven completing the feedback. Mean confidence increased from 51.5 before the workshop to 75 afterwards on the VAS. All candidates stated they found the workshop “useful”.

Discussion:
Understanding the principles of airway management and possessing the basic skills needed to manage a patient with a compromised airway are essential for any new doctor. We found that airway management was an area that those early in their medical career did not feel comfortable with in our trust. We therefore designed a novel course, based on established teaching methods, to help undergraduates and newly qualified doctors develop these essential skills. The pilot workshop was extremely popular and feedback was good. No candidates had any suggestions for improvement. Following this success we plan to make this a regular event and will develop session plans, online booking and feedback tools that can be used by future teaching fellows to continue to run this workshop, ensuring sustainability. We hypothesise that undergraduates and foundation doctors in other regions also suffer from a lack of confidence in this vital area and other courses like this would provide an effective way to deliver airway management skills teaching. (deleted first bit of this sentence) A distance learning programme, with portable simulators, could be used to further the reach of this course. This would also allow candidates to train in a more distributed manner and at their own pace, allowing them to train to a criterion based, rather than time based, syllabus, which has been shown to increase skill set acquisition and development(6).

References:
5. Augustine E, Kahana M. Effect of procedure simulation workshops on resident procedural confidence and competence. 2012, J Grand Med Educ, 4(4) 479-485
Teaching About Specific Subjects

Incorporating Domestic Violence Teaching into the Undergraduate Curriculum through Simulation
A Demetri, F Charlton, J Taylor, J Moffatt, K Jones
University of Bristol

Background:
35% of women globally are the victims of Domestic violence and abuse (DVA) (1). Currently in the United Kingdom, it is estimated that two women are killed a week at the hands of a current or ex-partner (2). Healthcare professionals are in a privileged position to recognise, and potentially prevent domestic violence from occurring, with victims potentially presenting to a wide variety of specialties such as the emergency department, psychiatry, primary care and obstetrics and gynaecology. In 2014, guidance by the National Institute for Health and Care Excellence (NICE) recommended that training regarding DVA should be a part of the medical undergraduate curriculum (3). Nevertheless, a cross-sectional study of UK medical schools in 2017 found teaching on the subject to be limited and inconsistent, with a need for a better way to prepare future doctors (4). It is estimated that 30% of violence towards women starts or worsens during pregnancy (5). Given the increased prevalence of domestic violence in pregnancy, and its links to issues in women’s health, arguments have been made that the O&G curriculum would be an ideal place to give students more teaching on this important issue (6). At the Great Western Hospital, domestic violence has been incorporated into the O&G in a number of ways, including simulation, tutorials from 3rd sector organisations, and student selected components. Data has been collected to assess the value of this for students.

Methodology:
A domestic violence simulation session has been designed and run for 4th year Bristol medical students undertaking their placement in O&G placement for the last 4 years. This was run using clinical teaching fellows as actors in the simulation suite, with the help of 3rd sector organisations (the Nelson Trust and Swindon Women’s Aid) in debriefing. Students were asked about their prior teaching, self-assessed knowledge and confidence in how to deal with possible DVA situations, before and after taking part in the simulation. The knowledge and confidence was scored on a 5 point Likert scale. Qualitative data was also collected.

Results:
Result from 2014-2018 domestic violence simulation has been collated. 55 students so far have taken part in the simulation. Students have demonstrated an increase in self-assessed knowledge and confidence each year, which is statistically significant. 64% of students have stated that they have received some form of domestic violence teaching in medical school. However, all of this was in the form of tutorials or communication skills as opposed to simulation. Student feedback regarding the sessions was very positive: ‘Very valuable to have a fully simulated experience as it’s not a topic that can be learned through theory only’ Self-assessed knowledge (rated 0-5) in dealing with domestic violence increased from a mean of 2.65 out of 5 to 3.8 out of 5. Self-assessed confidence (rated 0-5) in dealing with domestic violence increased from a mean of 2.22 out of 5 to 3.64 out of 5. Full statistical analysis of both current and retrospective data will be completed when all 2018/2019 data has been collected.

Discussion:
Domestic violence is an important topic, and the undergraduate O&G curriculum appears to be an ideal place for this to happen. Although tutorials and communication skills teaching on the subject appears to occur in medical school, students appear to value practical learning through simulation more. The session appears to improve confidence and knowledge and students value this teaching resource above learning about DVA through tutorials. This study can be seen to support simulation as a form of teaching of issues surrounding domestic violence for undergraduates. We believe our experience supports the case for domestic violence teaching through simulation in the O&G undergraduate curriculum (6). We hope that our findings may lead to more medical schools following suit and attempting to develop and implement a domestic violence simulation in their curricula also.

References:
It's all fun and games until somebody gets hurt: Using a scavenger hunt game to teach human factors to junior doctors

L Baxter
South Tyneside District Hospital

Background:
Human factors are extremely important in healthcare. It is now a requirement that all junior doctors demonstrate understanding of human factors in medical error (1). Feedback from previous teaching to Foundation Doctors on human factors in this trust included comments such as 'just not relevant to us at this level of our training.' This shows a fundamental lack of understanding that has not been addressed through previous education.

Methodology:
Foundation Doctors at this trust have weekly teaching of 90 minutes duration. One of these sessions was entitled 'Introduction to Human Factors' with the session aims to meet the outcome as expected in their Foundation Programme Curriculum: 'Describes the role of human factors in medical errors and takes steps to minimise these.' The session was divided into 3 parts: Part 1- Scavenger hunt The Foundation doctors were divided into teams. They were given 15 minutes to collect items from a scavenger hunt list and complete bonus tasks. Points were awarded and deducted for adherence to task rules, items collected and tasks complete. Tasks required them to negotiate with education centre staff members, manage and prioritise their time, work as a team, and manage distractions. There were enough tasks and items to collect to create significant time pressures. Loud, repetitive music with a countdown timer was played. On completion they were asked to evaluate in pairs, then the wider group, what made the scavenger hunt difficult to complete, and what they did as a team that helped. As a group they then sorted their suggestions into 2 categories: human factors and non technical skills. Definitions were given for both. Part 2- Introduction of a model Now their understanding of exactly what human factors were was correct, they were introduced to the SHEEP model (2) for identifying human factors. They were given a short history of human factors in healthcare and some key cases were discussed. They were asked to look at the SHEEP model and think about an error made in a patient they were caring for, then identify some factors which may have led to that. Part 3- Human Factors in Healthcare A video of 'Gina's story' (3) was shown to the group. They then discussed all the factors that led to the errors in the video. They discussed what system changes could have helped, and how development of the team's non technical skills may also have changed the outcome. At the end of the session they were encouraged to think about human factors in their own working environments, in the context of their own personal factors and also any quality improvement projects they might do. They were asked if they were to redo the scavenger hunt, what processes could improve their performance, and how these might be applicable to clinical work.

Results:
33 Foundation doctors attended the teaching over 2 sessions. Confidence in describing and identifying human factors, as well as taking steps to minimise them, increased by an average of 37%. 100% of attendees felt the session was relevant to their clinical practice and training. 100% listed the scavenger hunt as their favourite part of the session. Free text comments included: "Really powerful and informative" "Interactive, fun, and backed up by relevant cases and information" "Turned a dry topic into something interesting and useful for our clinical practice" "Good that we all had to get involved, learnt a lot more by the practical demonstration in the scavenger hunt that I have in previous sessions on the topic"

Discussion:
Human factors is previously a topic junior trainees had found dry, uninteresting and difficult to relate to their own practice. This method allowed them to find the topic relatable and relevant. All attendees could describe the role of human factors in medical errors and takes steps to minimise these, as per their curriculum, by the end of the session. A scavenger hunt game is a valuable method to introduce the topic of human factors, and demonstrate the practical application.

References:
3. The Human Factor: Learning from Gina's Story. [Internet]. YouTube. [cited 15 January 2019]. Available from: https://www.youtube.com/watch?v=IIf0LsLsFo
Raising Awareness of Child Sexual Exploitation Using Simulation
R Webster, F Charlton, A Demetri, K Jones, C Broomfield
University of Bristol - Swindon Academy

Background:
Child sexual exploitation (CSE) is a form of child abuse. It can range from ‘seemingly consensual relationships, informal exchanges of sex in order to get affection, accommodation or gifts, through to exploitation by gangs involved in serious, organised crime’ (1). Data from a NSPCC survey suggests over 2,400 children were victims of sexual exploitation in gangs and groups from August 2010 to October 2011 (2). However, estimating the prevalence of child sexual exploitation is difficult and many believe that current data is underestimated. CSE is a key safeguarding topic of which all medical professionals need to be aware. Several studies have suggested that simple training measures can improve practitioner awareness and ability to identify these patients (3). At Swindon Academy CSE is taught to students using simulation. We decided to collect data to see how effective this method of teaching is at improving knowledge regarding CSE.

Methodology:
We surveyed fourth year medical students who took part in a CSE simulation during their placement at Swindon. The scenario involved taking a history from a 16 year old girl who presented with pelvic pain. There were several concerning features that should prompt the students to think about child sexual exploitation. This was then further discussed in the debrief, with exploration of risk factors and how this scenario should be initially managed. Students were asked to complete a questionnaire before the simulation to assess their prior knowledge of child sexual exploitation. This included free-text questions on risk factors for CSE and what they would do in various CSE situations. The students were then asked to complete the same questionnaire following the simulation and debrief. Both questionnaires were marked against a pre-defined mark scheme designed with reference to the Swindon Local Safeguarding Children Board guidelines (4). ‘Before’ and ‘after’ results were compared.

Results:
Data is still being collected. 30 further students will have completed the simulation this academic year. Initial results from the first group surveyed showed that students were more aware of the prevalence of CSE and the importance of raising concerns with Social Services.

Discussion:
CSE simulation is a good way to raise awareness of this important topic. Students demonstrated that their knowledge of risk factors and of how to manage CSE scenarios increased after taking part in this teaching and they also felt it was a good way to learn about the topic.

References:
2. Berelowitz S, et al. “I thought I was the only one. The only one in the world.” The Office of the Children’s Commissioner’s inquiry into child sexual exploitation in gangs and groups: interim report. 2012.
The impact of a practical workshop based summer school for year 9 and 10 pupils for widening participation (WP) to medicine

J N Parekh, H Orme, H Orme
Leicester Medical School

Background:
The Selecting for Excellence report in 2014 found that 80% of UK medical students come from 20% of secondary schools [1]. The 2017 report also found that around 70% of medical students have at least one parent with prior experience of higher education, compared with 27% of the general population. This discrepancy in education and socioeconomic status between doctors and their patients persists, despite a number of methods employed by medical schools. The importance for WP in medicine is two-fold - individuals from a WP background with a passion for medicine are assisted in overcoming barriers whilst the NHS is served by a more representative population of doctors. Thus, a residential Summer School for year 9 and 10 pupils from WP backgrounds in the local area was created, building on the well-established MedReach programmes already provided.

The aims of the Summer School were: -

- To give the young people the confidence to apply to medical school
- To inspire them and to widen their aspirations and consider university as a future option
- To provide them with vital information and advice about applying to medical school

Methodology:
The Summer School was split into two sections: the first involved medicine-specific activities including practical workshops, whilst the second was more general to university (experiencing living independently). This combination was designed to provide inspiration to pursue a career in medicine, but also to make attending higher education a less daunting prospect. GCSE-level biology was used to provide a basic understanding of the systems of the body, before progressing to examination of systems and use of various equipment. The seamless transition between GCSE biology and basic medicine meant that the pupils could engage with and enjoy the content, while the combination of short lectures with practical sessions created a fun but informative learning environment. The sessions were designed and led by a current Leicester Medical Student, whilst each small group was led by another Medical Student mentor. This ensured that the content was relevant, and the young people were able to ask questions and receive truthful answers and genuine help, as well as providing a role model for them. Content was moderated beforehand by both WP and medical school staff. In 2018, we introduced a new workshop on mental health to help the pupils develop a holistic approach to healthcare.

Results:
Two years of data has been compiled, each year analysing slightly different parameters in line with the other summer schools running with pre and post course questionnaires. In 2017, there was a 40% increase in understanding how to apply to university. Pre summer school, 47% of pupils had a good understanding of medicine whereas 87% reported a good understanding after. Similarly, looking at understanding of “how to study medicine at university” and “skills and experiences needed for a successful application to Medicine”, there was a reported 75% improvement. One significant result was “I plan to study medicine at university” which actually decreased by 1% (24% to 23%). In 2018, over 85% of pupils found the new mental health workshop interesting or enjoyable. The sessions considered most fun due to their interactive and practical nature were delivering first aid and the respiratory system. Furthermore, 77% of students planned to go to university following this summer school. Finally, the benefit of student mentors who are current medical students cannot be overstated as 100% of school students agreed that they enjoyed working with their mentors.

Discussion:
Summer Schools represent not just the opportunity to learn about a subject for current school pupils in their GCSE years, but also the opportunity to learn about what university life is like. Widening participation to both university and medical school is vital and this early exposure to university will generate greater variation in students applying and getting into medical schools.

References:
The Introduction Of A Multidisciplinary Medico-Legal Study Day In The Post Bawa-Garba Climate.
J Pascoe, N Cook, E Howie, P Mackey, R Innes
Musgrove Park Hospital, Taunton

Background:
"Physicians, in general, know nothing about the law when they qualify, and lawyers rarely ever know anything about medicine as it relates to the law"1. The legal side of medicine remains a closely guarded secret of the hidden curriculum, with most junior doctors having little to no exposure at an undergraduate level. Recently, cases such as that of Dr Bawa-Garba have shed a media spotlight on the importance of understanding the legal ramifications of medical practice. We believe there is a role for an integrated physician-lawyer lead conference exploring modern medico-legal principles and relevant cases.

Methodology:
All staff members at Musgrove Park Hospital, Taunton, were invited to a full day conference based around medico-legal medicine. Presenters ranged from psychiatrists and intensivists to prosecutors and defence lawyers providing a wide variety of expertise for the day. It remained a safe space for interactive discussion.

Results:
Overall the course was well attended with 53 members of staff attending. This ranged from doctors, lawyers, nurses & allied health professionals. A same day survey was sent out to all attendees with a 46% response rate. Capacity The first two sessions were run by a consultant psychiatrist & court of protection lawyer and looked at the logistics of capacity. The use of cases was praised and favored a practical approach necessary in practice. Decision-making & futility Defence vs prosecution in a further debate of real cases and taking time to involve the audience in their own views. The clarity, confidence and chemistry between the sides was well-received and 100% rated the sessions as excellent or good. Medical Mediation A consultant with a background in medical mediation took time to explain a relatively new concept that many were “unaware existed”. A clear explanation encompassing the role of this new field was deemed thought provoking and very relevant given the current climate. How easy is it to be convicted of gross negligence? By far the most controversial session of the day took time to look in depth at the case of Bawa-Garba and how the events lead to prosecution. Whilst some praised the confrontational nature of the presenting barrister as a tactic to generate discussion, others found it one sided. There was a universal sense of empathy among the physicians in the room with a feeling that the legal side did not appreciate the true focus of the case on system vs individual error. Your Cases In the closing session of the day cases were discussed from a number of physicians in the room, focussing on their own previous experience. Some looking for advice on what others would have done and others highlighting recurrent themes that could impact further physicians. This again was praised for being a safe space for positive discussion.

Discussion:
Overall the feedback for the course was positive with all saying they would be interested in re-attending courses of a similar nature. We feel there may well be a case for an annual event such as this and that a potential next step would be to introduce medico-legal medicine to an undergraduate curriculum.

References:
Use of Clinical Simulation to Improve Management of Acute Coronary Syndromes
J Spiers, M Hunsley, R Horton, L Baxter, M Brazell, S McKerron
South Tyneside District Hospital

Background:
Clinical simulation can be used to improve knowledge, competence and performance in a safe and controlled environment through the artificial replication of a real-life clinical scenario (1, 2). We have recognised the merits of using simulation to improve the management of Acute Coronary Syndrome (ACS) at South Tyneside District Hospital. Anecdotally this has been recognised as an inconsistently managed presentation by junior doctors at South Tyneside District Hospital and when ACS simulation was delivered as part of Foundation acute scenarios simulation teaching, it was noted the majority of Foundation trainees were unsure of the appropriate management.

Methodology:
We have liaised with the Cardiology team to produce a standardised ACS protocol, which includes STEMI, NSTEMI, and cardiac chest pain with no ECG changes. This trust does not currently have an up to date guideline available. The protocol created is in line with national and regional guidelines. Using the newly developed protocol we have carried out an audit across the emergency medicine department to determine if current practice follows the proposed ACS protocol. We plan to run ACS simulations in acute areas as a method of assessing individual performance and providing simulation based training based upon the new ACS protocol. Alongside simulation training, we aim to roll out the ACS protocol across the Hospital, including departmental and Trust-wide teaching. We will also deliver a dedicated ACS simulation training day for Trust staff. A re-audit will be completed to determine if there is measurable improvement in management of ACS.

Results:
We audited chest pain admissions to the medical admissions unit over 10 randomly selected days in November. 15 patients were admitted to the admissions unit with possible cardiac chest pain over these days, of which only 2 were appropriately managed according to the protocol. Simulation will provide additional objective data on clinical practice and performance, and allow targeted feedback and training. We will be able to assess through feedback whether attendees plan to change their practice following the session, and then through repeated simulations whether this change has occurred. The re-audit of admissions will provide objective data to determine if there has been a significant improvement in clinical practice in alignment with the new ACS protocol.

Discussion:
Our initial audit has shown current management of ACS is not in line with national guidelines. Launching a protocol in isolation is unlikely to be effective and evidence shows protocols are often not followed by physicians if they don’t understand the evidence behind them, instead relying on a variety of internal and external factors when making decisions about patient care (3,4). By doing repeated simulations alongside dedicated teaching on the new ACS protocol we hope to encourage a change in practice and subsequently measure a significant improvement in the management of ACS in this trust.

References:
A Comprehensive Near Peer Revision Course Delivered By Final Year Medical Students To Fourth Year Students
A Al-Hadithi, M Abdelaziz, G Hourston, H Kankam
University of Cambridge/North West Anglia

Background:
Medical education is increasingly recognising near peer teaching as an effective teaching method during undergraduate medical programmes(1, 2). Near peer teaching programmes offer mutual benefits to the tutor and the tutee(3). Indeed, tutees gain more from tutors that have a similar knowledge base compared to an expert in the field according to the cognitive congruence hypothesis. On the other hand, advantages of peer teaching in medical education for the “tutor” include providing role models for junior students, preparing physicians for their future role as educators and revising their own knowledge base(4). We describe a student-as-tutor near peer revision programme developed for fourth year medical student “tutees” and delivered by final year student “tutors” during their clinical rotations.

Methodology:
A series of six hour-long sessions covering core medical and surgical topics were designed for and delivered to fourth year University of Cambridge medical students. Sessions were planned based on responses to a pre-course questionnaire assessing their desired topics and teaching style. The sessions aimed to tackle both theoretical and practical knowledge essential for clinicians. This included a mixture of information presentation, case-based discussion, single best answer questions and practical demonstrations. Sessions were delivered in large-group sessions using a lecture-based, interactive approach. The sessions were based in Lister Hospital, Stevenage, and each session was delivered by two final-year medical students during their “Apprenticeship” placement.

Results:
A total of 108 “tutee” responses were collected across 6 sessions (average 18 responses per session). Fourth year medical students rated the usefulness of the sessions as an average of 9.18 out of 10 across the 6 sessions, 9.25 for content and relevance, 9.20 for teaching and presentation style, and an overall rating of 9.19. Of the 108 total responses, 101 felt more confident on the subject following the session. Average confidence (1=not at all confident to 5=completely confident) before the sessions was 2.86, while confidence following the sessions was 3.74. All respondents “Strongly agreed” or “Agreed” that they would recommend the course to other students. Qualitative analysis showed that common key themes included the appreciation of information being more appropriately pitched to their learning level, summarising relevant key concepts and a greater degree of interactivity. All final year medical student “tutors” enjoyed partaking in the programme and would recommend others to partake in teaching this course, particularly given its utility in revising knowledge and gaining presentation skills.

Discussion:
This study supports the use of near peer education programme in undergraduate medical education. The majority of fourth medical student “tutees” provided positive feedback and were more confident on the subject following the session. Similarly, the final year student “tutors” would recommend teaching on the course. Both tutors and tutees perceived near peer teaching sessions as beneficial experiences.

References:
A simple intervention to improve the educational value and enjoyment of early clinical encounters for novice medical students.
T Chambers, N Devani, D Kemp, V Gkiousias, P Dilworth
UCL Medical School

Background:
Novice medical students find self-directed clerking of patients a challenging task. Research has noted the struggles students face in summoning the courage to initiate self-directed clerkings and how these unguided experiences can end up as disheartening and a ‘waste of time’ (1). It is recognised that these experiences might adversely impact their achievement of the learning expected during early clinical encounters (2). Despite this, there is a paucity of work looking to improve these early clinical encounters. Our research demonstrates how a simple and easily-implementable intervention can improve the educational value of these clerkships and increase enjoyment of early clinical encounters.

Methodology:
We studied 4th year undergraduate medical students completing their first clinical rotation across 3 medical wards at 3 London teaching hospitals. Our intervention group comprised 12 students at a site where the identification, during ward rounds, of patients suitable for clerking was undertaken by the medical team. Patients were asked if they would be happy to be clerked by students. Names and bed locations were logged on a regularly updated list within the ward office, accessible by students. Two control groups (24 students) were studied at sites without this structured system in place. Students completed questionnaires at the beginning and end of their 4 week placements. Likert scales, scored 1-10, were used to assess enjoyment of clerkings and confidence in taking histories and examining patients. We included a free text component to the surveys to gather extra input from students about clerking experiences. We continued to assess subsequent student cohorts’ experience of clerkings. We gave questionnaires to these students at the end of their rotations to compare student experience at the intervention site vs the control sites.

Results:
The improvement, from baseline, in confidence levels for taking histories after students’ first placement was markedly greater in the intervention group compared to the control groups (increase in confidence 3.29 vs 0.91). Confidence levels for examining patients also increased by a greater extent in the intervention group (increase in confidence 1.99 vs 1.04). Notably, there was also a greater level of enjoyment of clerkings in the intervention group (8.55 vs 7.6). Successive surveying of cohorts of students rotating through the wards revealed that almost all students (27/30) at sites without the intervention would favour the availability of a list to specifically identify suitable patients to clerk. Free text comments in these successive questionnaires emphasised the positive impact of the list and highlighted its ability to overcome barriers to successful clerkings.

Discussion:
Structured identification of suitable patients to clerk removes common barriers faced by students and can additionally improve patient experience. Students do not feel like they are imposing themselves on patients and experience fewer instances of being turned away when trying to clerk a patient. Patients are aware that students will come to clerk them and may be more receptive to giving a history. Doctors face an inevitably busy working schedule so timetabling formal clerking teaching can be challenging. Making this intervention part of the daily ward round makes it time effective and manageable. This intervention can improve enjoyment of early clinical encounters and increase student confidence in taking histories and performing clinical examinations. Further study is warranted to assess the impact on subsequent academic performance and clinical practice of this intervention. Identifying further barriers to clerking and how best to maintain this list in the busy ward environment is also worthwhile. We suggest that the ease and success of implementing this intervention warrants implementation across medical firms to increase educational value of these all important early clinical encounters.

References:
**Background:**
Junior medical students often find it daunting starting clinical attachments. Understandably, they lack confidence and are new to the hospital environment. For this reason, they may not get the most out of clinical placements. At Lancaster Medical School (LMS), year 2 students undergo their first clinical attachments at both Royal Lancaster Infirmary (RLI) and East Lancashire Healthcare Trust (ELHT). The General Medical Council states that teaching doctors and students is important for the care of patients. Near-peer teaching (NPT) is increasingly recognised as an effective method for teaching and learning within medical education. A buddy system was designed and the impact of this educational strategy evaluated with near-peer learners surveyed before and after the sessions. 

**AIM**
We aimed to create a structured, informal ‘buddy system’ for the year 2 LMS students rotating through ELHT as well as RLI. This would address the educational and potential pastoral needs of the year 2 medical students as well as supporting them in their early clinical experiences.

**Methodology:**
Before the launch of the buddy system to the region, it was first trialled at RLI. Students were given a pre-programme survey using a five point Likert-like scale. This was used to evaluate their overall confidence levels within the hospital environment as well as examination and procedural skills. A structured teaching programme was then created. Guidance in terms of the teaching topics was given to the educators. A post-teaching survey was also conducted. Following on from this, the buddy system ‘Bedside Buddies’ was launched at both RLI and ELHT. It has two arms - namely bedside teaching and pastoral guidance. Two junior doctors who were interested in teaching and volunteered, were paired up with two medical students, allowing continuity if one doctor was unavailable. A booklet highlighting the roles, teaching topics and pastoral guidance, with clear routes for accessing help from the Department of Undergraduate education (DUE) was created for the educators. They were asked to meet at least once every 2 weeks, with the content of their teaching and discussion being relatively non-prescriptive and tailored to the students’ needs within the year 2 curriculum.

**Results:**
The initial survey results at RLI showed that 69% of the students found it to be a useful or very useful system. Confidence on the ward, examination skills and history taking all saw a significant increase (p<0.05). On average, the students and doctors met up fairly regularly, however this could have been improved. The students reported less anxiety and were keen for a similar programme to run at ELHT. Taking the lessons from the trial at RLI, a new ‘Bedside Buddy’ near peer system was created. It was rolled out to RLI as well as ELHT in order to create a consistent teaching and support platform for the year 2s throughout the year, regardless of where their clinical placement was. Furthermore, a pastoral side was also incorporated. This allows the Year 2 medical students to have another potential source to seek help or raise concerns, which is part of their professional responsibility. Whilst we are still collecting results from the first cohort of Bedside Buddies, we anticipate it to be very successful. A post teaching survey is currently underway.

**Discussion:**
Summary & Conclusions
This system is structured and tailored to the year 2 curriculum and logbook. It allowed the educational needs of the students to be met on a regular basis and in a less ad-hoc manner, with familiarisation to the clinical setting in a supported fashion. ‘Bedside Buddies’ creates consistency for the LMS students rotating within the region. Students are able to receive regular feedback, with personal and focused teaching. Using the near peer teaching style, students may feel more comfortable with junior doctors as they may be able to relate better to the anxiety of starting clinical attachments.

**References:**
Do Autobiographical books written by Doctors have the power to alter Medical Students’ Perception of a career in medicine: a qualitative analysis.
C MacSweeney
Queen Mary University of London

Background:
I was interested in the emergence of these autobiographical books written by Doctors which describe their experience of being Doctors and the impact that this can have on students’ ideas about becoming a doctor. The popularity of these kinds of books is enormous and the impact they have is big enough that both of the authors have met directly with Jeremy Hunt to discuss the Junior Doctor Contracts. Because of this I thought it was a topical subject and one that has had limited research before. I was interested to see whether these books have the power to change the perspective of Medical Students regarding a career in Medicine. The reason I have chosen to study these two books is that they are both very popular, but also that the authors, though describing similar experiences in many ways ended up having differing views on Medicine as a career. Rachel Clarke still works for the NHS whilst Adam Kay has chosen to give up his career as a Doctor and pursue comedy instead. I was interested to see whether these conclusions are reflected in the attitudes of the students after reading the books. Whilst there is some research about medical students’ attitudes towards certain career paths (1), I was interested in how they might be influenced by external factors such as autobiographical books. I think that this question is important because the books are so popular, and particularly when students have limited experience of the reality of a career in medicine these books may have the power to influence them and cause them to become more cynical or optimistic about what their future career entails which could then lead to an increased or decreased likelihood of burnout and could affect their overall sense of well-being at university (2), (3). With that being said, I thought that it was important to discover more about the way that external factors beyond control within the curriculum have the power to affect the way Medical students think and feel, as this could have further ramifications later on in their careers. I feel that anything that has the potential to affect a students’ well-being should be investigated so as to be known by the educators. In terms of the impact the alteration of a students’ perspective to studying Medicine, I feel that this definitely has the power to make a difference to the lives of Medical Students. It is shown already that motivation is linked to academic performance (4) and so this is an important thing to consider from an educational perspective when considering factors affecting achievement and student well-being at university - two factors which in themselves are intrinsically linked.

Methodology:
The undergraduate students taking part in my study were recruited by posters around the academic buildings of my university campus. They were then asked about their preference of book and allocated a book to read if they demonstrated no preference. Subsequently they all took part in a semi-structured interview using a pre-prepared proforma conducted by me. The interviews were recorded and then transcribed again by myself. Following this I undertook a thematic analysis of the data in order to note trends between the comments of the students and linked this to current literature.

Results:
I have not yet completed my research and so have not yet achieved my results but will have them by the time of presentation.

Discussion:
I have not yet completed my research and so have not yet achieved my results but will have them by the time of presentation.

References:
Evaluating the introduction of a ten-minute teaching session format in a Critical Care Unit

J Dunne, T Tolppa, S Brown, K Tatham
The Royal Marsden NHS Foundation Trust

Background:
Developing skills in managing acutely unwell patients is increasingly important for non-intensivists, as recognised by the “Shape of Training” report.[1,2] Critical care unit (CCU) rotations are an excellent opportunity for junior doctors to gain skills, knowledge and experience in treating unwell patients through practical learning supplemented by formal teaching. However, organising teaching in CCU is particularly challenging due to the acuity and unpredictability of the work.[3] In addition, the breadth and depth of knowledge makes it difficult for teaching to cover all topics relevant to doctors with limited prior CCU exposure.[3,4] In our 16-bedded CCU of a tertiary cancer hospital, foundation and specialty trainees received weekly one-hour didactic lectures. Due to clinical demands, the regularity and attendance of teaching, however, varied. To address this, we implemented thrice weekly ten-minute teaching sessions delivered as part of the morning multi-disciplinary handover. The aim of this project was to evaluate the impact of this new teaching schedule on the number of sessions attended, breadth of topics covered and educational value to trainees rotating through CCU placements.

Methodology:
The programme was evaluated by administering a semi-structured questionnaire prior to the introduction of the new programme (baseline) and 16 weeks post-implementation. The baseline and post-implementation groups consisted of nine different doctors in training, including foundation doctors, core medical trainees and critical care specialty doctors. The survey included questions on session length, quality, topics and usefulness. Data was also collected on the number of attendees. Differences between groups were compared using the independent t-test and the Fisher’s exact test with a significance level of p<0.05. Data analysis was completed using STATA (Statacorp, TX).

Results:
A total of 17/18 trainees (94.4%) completed the questionnaire with nine responses at baseline and eight post-intervention. All doctors at baseline and only half in the post-intervention group reported attending fewer than six sessions each month (p=0.04). Most sessions were delivered by consultants in both groups. However, sessions delivered by the multidisciplinary team (MDT) increased from 0.3±0.5 to 2.0±1.8 (p=0.02). The baseline group felt that there were too few sessions on CCU-specific topics (55.6%), data analysis (88.9%), management of emergencies (100%), equipment (77.8%) and oncology (77.8%). There was a statistically significant improvement post-intervention (p<0.05) with trainees reporting a good balance of sessions on CCU-specific topics (100%), data interpretation (62.5%) and management of emergencies (62.5%). All doctors felt teaching was relevant and useful at baseline. In the post-intervention group only 50% (p=0.03) felt sessions were useful and 62.5% (p=0.08) felt they were relevant. One trainee reported that the ten-minute teaching was not useful or relevant.

Discussion:
This evaluation found that the number of teaching sessions and topics covered with weekly lectures improved significantly with the introduction of ten-minute teaching sessions. The new timing of teaching allowed both night and day trainees, along with other members of the MDT, to attend and deliver teaching. This is encouraging in view of the multi-disciplinary nature of critical care and current guideline recommendations.[5,6] The teaching was associated with a reduction in the perceived usefulness of teaching, particularly in the case of one trainee. The learning needs of different doctors vary, and other educational activities may be required to cater to their needs. Therefore, the ten-minute teaching sessions may be appropriate for supplementing longer sessions to ensure exposure to more topics but may not be sufficient to cover the depth of critical care knowledge for all learners.

References:
Leading the ward round: can medical students undertake a safe, independent ward round?
G Dixon, A Pereira, T Dowling, AE Stanton
University of Bristol

Background:
Foundation year doctors are required to participate in medical and surgical ward rounds1. We have previously reported the discordance between the reality of having to undertake independent ward rounds and the pre-conceived beliefs of consultants and medical students about whether FY1 doctors perform this task2. We reported that 97.8% of junior doctors undertook an independent ward round as an FY1 whereas only 40.7% of consultants expected FY1s to undertake ward rounds independently2. We described the use of simulated ward round teaching using a new acronym “PERFECTS” to prepare final year medical students for practice. This acronym is used to prompt the key aspects of what is felt to represent safe ward round practice for foundation year 1 doctors. We aimed to enhance the programme further by investigating whether using the “PERFECTS” acronym enables students to undertake a safe and effective ward round with a real patient.

Methodology:
We will deliver the previously reported simulation programme to final year medical students attending a district general hospital during their “Preparing for Professional Practice” unit (comprising student assistantships). Students will undertake ward round reviews of patients during their attachment and document their ward round entry. The patients will then be seen by the relevant qualified doctor. To ensure patient safety students will not independently enact any plans without discussion with a supervisor. We will use a traffic light system to record whether any significant errors or omissions were made by the medical students and whether their plans differed significantly from that of the doctors. We will then compare the data from the students with the entry in the notes written by the qualified doctor. We will then analyse the students entries against the pre-defined ward round documentation criteria previously reported. We will also review whether students used the “PERFECTS” model designed previously.

Results:
31 students will attend our district general hospital for placement between January and March 2019. The results will be expected to be available by the end of March.

Discussion:
Having previously identified a significant gap in final year medical education we have designed an interactive, multi-phase course to address these concerns. The results will show the impact the PERFECTS model and ward round simulation will have in enabling students to undertake a safe and effective ward round. It is hoped that with longitudinal follow up of students who have commenced practice we can investigate whether this programme has a lasting impact.

References:

Board: M6
Making the most of learning opportunities: Improving foundation doctors’ access to theatre
C Stewart, R Hodnett, C Maclver, H Hall, ZCraft
Royal United Hospital

Background:
Students often find the operating theatre can be a challenging place to learn (1-3). Research has shown that medical student learning experiences vary depending on how welcome they feel whilst in theatre and learning opportunities can be improved by familiarity with staff roles, and a realistic expectation of what objectives they can achieve there (4). I would infer that this is still true of foundation doctors, though there is a distinct gap in the research where this is concerned. Anecdotally whilst working as a surgical SHO I have noticed junior members of the team, who may not be keen on pursuing a surgical career, are uninterested in spending time in theatre. However, it is here that they have the opportunity to access one-on-one teaching with a consultant. Learning in theatre doesn’t have to be just based around operative technique; rather, students can use theatre to learn about pre-/post-operative care, anatomy, and why different complications happen as a result of certain operations. These lessons are applicable to all aspects of medicine, as many of these doctors will be dealing with patients that have had an operation in their future careers, not to mention family member who may be concerned about an operation they’ll be going through. This teaching session will aim to change the behaviour of foundation doctors, encouraging them to access this privileged learning environment and make the most of the opportunity available to them.

Methodology:
We have emailed out a pre-intervention questionnaire to the cohort of Foundation Year 1 (FY1) doctors working at the Royal United Hospital, Bath. The aim of this questionnaire is to establish what their current experience of learning in theatre has been, how useful they feel it is, and what they find to be the main obstacles to accessing this learning environment. Following on from this we shall deliver an afternoon teaching session looking to address these issues. This session will include a practical workshop using the laparoscopy training kits along with teaching on how to scrub and teaching on basic theatre etiquette. The session will be videoed with the intention of developing an online tutorial that can be used as part of the trust induction program for new foundation doctors. A post intervention questionnaire will be sent out 1-2 months after the session. The aim of this questionnaire will be to identify not only if learning has taken place but also if the contents of this session have led to a change in student behaviour in terms of how they access theatre. In order to encourage participation in both questionnaires, students will be given the option of being entered into a prize draw to win an Amazon voucher on completion of each questionnaire.

Results:
We will compare results from the pre- and post- intervention questionnaires. Using Chai-square statistical tests we will be able to confirm whether a statistically significant improvement has been seen in responses to the Likert scale questions. Additionally, we will undertake thematic analysis of the qualitative data gained through the use of open questions.

Discussion:
We shall draw conclusions based on the analysis of the results acquired. The aim of this shall be to identify where the session worked well and how it could be improved to better achieve changes in student behaviour as well as learning. Ultimately, if successful, we hope to roll out this session as part of the foundation doctor induction program across Bath/the Severn deanery.

References:
A Scoping Review on how learners use, seek and respond to feedback
M Spooner, C Duane, S McConkey, T Pawlikowska
Royal College of Surgeons in Ireland, Dublin

Background:
International movement of students and transplant of Western-devised programmes to sister sites is becoming more common in medical education. It is of increasing importance to examine this implementation cross-culturally. It is generally acknowledged that education methods reflect socio-cultural values. (Bleakley et al, 2008; Wong 2011; Harkness et al, 2007) and in particular, research supports that feedback messages and response to them vary. However little is known of medical students’ feedback recipience in terms of how it affects their follow-up learning. The purpose of this review is to map the landscape of what is currently known regarding feedback-seeking behaviours and response to feedback among undergraduate and postgraduate learners in health professions education

Methodology:
A scoping review was conducted to explore how learners use, seek and respond to feedback. Joanne Briggs Institute protocol was utilised. The following databases were searched: Pubmed Medline, PsychInfo, Embase on Elsevier, CINAHL, Emerald and Health Business Elite. Citation searching was also conducted. 3,486 papers were identified initially. Screening, data extraction and analysis procedures were performed by two independent reviewers using a consensus approach

Results:
The following themes emerged: much of the literature focusses on the nature of feedback rather than behavioural elements associated with the learner. Most studies did not provide a definition of feedback. The most common interpretation of feedback was any information related to a performance so included, for example, correct answers, haptic information, etc. Many studies thus implied learners used or responded to feedback by equating these with improved assessment performance. Theories of feedback and/or conceptual frameworks were not observed frequently, nor were learners’ use of feedback or feedback-seeking behaviours.

Discussion:
There is heterogeneity in conceptualization of feedback and thus, feedback recipience. Assumptions and/or indirect measures on how learners use and/or respond to feedback are frequently reported. Future research should be directed towards explicit examination of these factors with a more theoretical focus to inform study design.

References:
Aligning assessment practices with the pedagogies of sustainable healthcare
K Leedham-Green, F Mortimer
Imperial

Background:
Sustainable healthcare requires attention to the environmental, social and financial costs of healthcare delivery (1), with an emphasis on high value care that is acceptable to stakeholders but takes into consideration the needs of future generations (2). Viewing healthcare practices through a sustainability lens opens up new ways of thinking about and defining healthcare quality, and also supports the healthcare sector in reducing its carbon footprint (3,4). The GMC requires all medical schools to ensure that graduating doctors are able to apply the principles of sustainable healthcare to their practice by 2020 (5). There is limited evidence on how to align assessment practices with this new learning outcome, and there is concern that student learning might be compromised without constructive alignment between learning outcomes, teaching and assessment practices.

Methodology:
An assessment day was organised by the Sustainable Healthcare Education Network across four UK regional hubs attended by sixteen clinicians, academics, and educators from seven medical schools, linked through video conferencing. Participants worked together to a) review and discuss the principles and practices of sustainable healthcare, and the pedagogies that might support learning b) write and review a set of single best answer (SBA) questions to Medical Schools Council Assessment Alliance (MCSAA) guidelines c) to create programmatic assessment ideas such as project work, assignments and research activities d) to generate clinical assessment ideas including OSCEs, PACES and work-place based assessments.

Results:
Participants demonstrated a range of conceptions of sustainable healthcare that included direct action on waste, low carbon swaps, and more indirect actions such as addressing the drivers of healthcare activity through health promotion, disease prevention and supported self-care. Participants criticised the current assessment paradigm in medical schools, which was not felt to encourage criticality or creative approaches to complex problems. Participants contributed 27 multiple choice questions, with approximately half likely to meet the MSCAA standards for SBA questions. The most highly rated SBAs related to reducing the carbon footprint of healthcare activity through dry powder inhaler prescribing, appropriate use of anaesthetic gases, lifestyle medicine, medicines adherence and stopping medicines safely. Suggestions for programmatic assessment items and project work included incorporating sustainability into quality improvement projects, community action projects, assignments relating to carbon footprinting and value in healthcare, and critical evaluation of the drivers behind areas of overtreatment and over-prescribing. Suggestions for clinical assessments such as OSCES/ PACES and work-place based assessments included lifestyle medicine such as smoking cessation and dietary change; shared decision making in relation to vaccination/screening and medicines starting/stopping/adherence; exploring and addressing the social determinants of health; and altering workplace based assessment templates so that they include the question “why has this person become sick and what can be done about that?” The SBA questions will be submitted to MSCAA for consideration for national use.

Discussion:
Assessments and assignments are known to drive student learning. It is necessary to create assessment items that support and drive sustainable healthcare education. The current assessment paradigm within medical education was criticised for not support criticality or creative solutions to ‘wicked problems’. Programmatic assessment ideas and projects including quality improvement were felt to be the most appropriate modality for sustainable healthcare education assessments, however organisers were encouraged by creative ideas for SBA questions and clinical assessments.

References:
Applying 'progress testing' principles to patient assessment skills
K Linton, F Oldale, J Crossley
Academic Unit of Medical Education, University of Sheffield

Background:
The progress testing method developed by Maastricht University helps teachers and learners think of assessment as a measure of progression rather than simply a measure of attainment (1). This ‘developmental’ frame of reference is appropriate to knowledge acquisition, and also seems appropriate to skill acquisition. Furthermore, in judgement-based assessments such as workplace assessments, it may help to combat ‘fear of failure’ in students and ‘failure to fail’ in assessors. Indeed, there is now good evidence in postgraduate assessment that replacing ‘merit-oriented’ judgement scales with ‘progress-oriented’ judgement scales significantly improves reliability and utility (2). Progress-oriented systems in use include ‘word-pictures’, ‘milestones’, ‘independence scales’ and various hybrids of these. Our work seeks to apply the principles of progress testing to medical students’ evolving patient assessment skills using milestones. Lomis et al have already demonstrated that a range of milestones can be used for progress testing in medical students (3), and Crossley has suggested that anchoring the curriculum to milestones in patient assessment can provide a ‘roadmap’ to help orientate student learners (4).

Methodology:
We report the development and initial evaluation of a progress testing system using milestones focussed on medical students’ evolving patient assessment skills. We report feasibility, acceptability, test-retest reliability and early evidence for validity. A committee of academic staff drafted initial milestones gleaned from the published literature and operationalised them for medical students. These were field tested in year 1, pilot tested in year 2, and then implemented using an online interface in year 3. Changes were made at each stage. The final form includes milestones for five domains which together reflect students’ patient assessment skills: patient interaction, history-taking, examination, interpretation of findings, and management planning. The online assessment form was used to assess (n=218) medical students at the mid- and end-points of the first of three 10 to 12-week longitudinal integrated clinical placements running from the third to the fifth and final year of our curriculum. The (n=94) assessors were almost all full-time clinicians nominated as medical student supervisors across 6 hospitals in our region. Instructions accompanied the form, but no special assessor training was given. Reliability is evaluated using generalisability theory to extrapolate from this ‘test, re-test’ scenario. Validity is evaluated in terms of cohort progression and the pattern of cohort attainment across the five domains.

Results:
There was high uptake of the assessment forms with 214 and 216 students submitting mid and end point assessments. Assuming that attainment is relatively stable between the mid and end-point scores, generalisability analysis indicates that approximately 7 assessments would be required to reach a co-efficient of 0.7. Scores indicated that our cohort were most advanced in their patient interactions, then history-taking, then examining, then interpretation of findings, and least advanced in their management planning. A number of students used milestones to describe their learning objectives for the next phase of the course.

Discussion:
This preliminary evaluation has shown that medical students and untrained faculty find milestones acceptable and feasible for progress-testing medical students’ evolving patient assessment skills. The faculty used the full range of milestones whereas, using the previous merit-oriented forms, they had rarely scored a student below ‘excellent’ or ‘good’. There is evidence that they are using that range meaningfully in terms of test retest-based generalisability estimates, and the demonstration of predicted differences of attainment across the five domains. Similarly, students appear to find the milestones meaningful - using them to set their learning objectives for the next phase of the course.

References:
4) Crossley JGM. Addressing learner disorientation: Give them a roadmap. Medical Teacher. 2014; 36(8): 685-691
Collaboration between students and staff supports students' summative preparation: a peer-led mock OSCE
A Nehra, W Channell, N Thakrar, R Westacott
University of Leicester

Background:
The introduction of Leicester Medical School’s new curriculum has resulted in a unique transition cohort who have undertaken a new but truncated third year and thus have had a different experience to their predecessors and to subsequent cohorts. Academic staff developed a brand new summative OSCE with bespoke elements for this transition year and alongside this introduced new end-of-placement formative assessments to facilitate students’ exam preparation. Despite these endeavours, the department acknowledged students’ desire for further validated examination practise but did not have the resources for additional academic-led formative assessment. The solution was to deliver a high-fidelity mock OSCE by working with Leicester Insight, a peer-led teaching initiative. Collaboration between medical school faculty and an established peer-led teaching group allowed the creation of an authentic mock OSCE experience.

Methodology:
The medical school endorsed and funded the running of a peer-led mock OSCE in the university’s bespoke clinical examination venue over the course of one weekend. Funding provided resources, equipment and clinical skills facilitators. Through liaising with departmental staff, stations were designed and written by the Leicester Insight team to reflect those within the new summative examination. Station content was subsequently reviewed by academic clinicians at the medical school. Senior medical students and foundation doctors were recruited as examiners and junior medical students volunteered as simulated patients. All medical student volunteers received a briefing about appropriate examination behaviour. Candidates were given four minutes of individualised verbal and written feedback after each 10-minute station using official marking guidance provided by the medical school assessment team. Doctors oversaw the running of stations to regulate the provision and content of feedback and monitored station performance. Questionnaires were given out to candidates immediately after the mock OSCE. The impact of each station on students’ perceived preparedness for the summative assessment was evaluated with paired sample t-tests and qualitative responses were organised into recurring themes. A second survey looking at student-perceived utility on summative exam performance is currently being undertaken and results will be included in this presentation.

Results:
Of 127 attendees, 112 returned completed feedback (88%). Logistical components of the OSCE were rated on a Likert scale, ranking as follows: organisation (4.96/5), examiner knowledge (4.96/5), station content (4.90/5) and feedback time (4.64/5). A statistically significant improvement in student-perceived preparedness was demonstrated in all OSCE stations (p<0.001). Stations in which students felt least prepared, such as fluid management, yielded the greatest positive impact in perceived preparedness gained. Event organisation (n=40) and level of examiner knowledge (n=26) were the most frequently praised attributes, whilst extended feedback time (n=9) and additional stations (n=9) were the most frequently cited areas for improvement.

Discussion:
Endorsement by the medical school permits a quality assurance process to develop reliable content and enriches the preparation of student examiners, whose knowledge and experience is highly esteemed by their peers. The peer-led nature of mock OSCEs creates a non-threatening environment for delegates to practise and ask questions, whilst medical school sponsorship confers authenticity to the examination practise. Moreover, with faculty collaboration, well organised peer-teaching can be delivered to a professional standard and is an efficacious tool to increase candidate confidence entering summative examinations.
Experience of using exam software for Anatomy Objectively Structured Practical Exams
A Venkatesh, I Cameron
University of Aberdeen

Background:
Assessments in MBChB degree programmes often include stand-alone Practical Anatomy assessments. At the University of Aberdeen Medical School this is conducted as an Objectively Structured Practical Exam (OSPE) where students provide free-text very short answers to questions (1) pertaining to cadaveric specimens or images (radiological/histological) that are placed in a circuit. These are entirely hand-marked making it time-consuming. Provision of specific feedback on class performance on specific questions or understanding exam question performance using psychometrics is difficult. Access to software allowing automated marking might help by decreasing marking time and providing improved feedback and analytics.

Methodology:
A trial was conducted with Year 2 MBChB students undertaking the Anatomy formative assessment using the exam software (Practique). The physical exam set-up remained unchanged. Prior to the exam, the questions were loaded onto the system. Students logged into the exam on individual tablets. They progressed through the OSPE typing in their answers. Following the assessment a feedback questionnaire was delivered to students during a whole-class lecture. The questionnaire was developed from free text feedback derived from pre-pilot exploratory work. It consisted of 5-point Likert scale questions (Strongly Agree-5 to Strongly Disagree - 1) and a free-text comment box. Field notes were taken during the process by medical school staff.

Results:
185 of 186 students sat the assessment. 124 (67%) completed the questionnaire. 3 students (2.4%) said they had never used a touch screen tablet before, and 39 (31.5%) had rarely used one. Students found the system easy to use (median response (MR) - 5, IQR 4,5) and agreed that it did not distract them from the exam (MR -4, IQR 3, 4). However free text comments suggested that some felt that using tablets increased exam stress. Students liked the ability to see questions on their tablet throughout the exam, (not just at the station as previously) (MR 5, IQR 5,5) and of flagging up questions to return to. (MR-4, IQR 3,5) Some comments indicated concern about risk of technology failure during exam and uncertainty about the processes of submitting answers and logging out. One student commented on the possibility of cheating. From the perspective of the educator constructing an exam using the software was more time consuming. In this first trial, it was not possible to anticipate all possible correct answers, increasing marking time to that of hand-marking. The exam software generated personalised feedback to all students which some anecdotally reported back as useful. The software also allowed psychometric analysis of the questions.

Discussion:
Use of specialised exam software allows educators to provide candidates with improved feedback and gather data on exam psychometrics. Such an analysis could improve quality of questions of future exams, something that was previously not possible with our OSPEs. Students coped well using tablets and were not distracted from the exam. However we need to bear in mind that setting up of an anatomy exam with its requirement to use variable cadaveric specimens makes the process more time consuming. It is important to realise that a small minority of students may not frequently use tablets, necessitating opportunities for students to familiarise themselves with this before high-stakes assessments. For assessments where students write free text answers, the automated marking process might at least initially take as much time as hand-marking. However the gains from improved candidate feedback and improved question standards by enabling psychometric analysis justifies the input of time and effort into its use.

References:

Board: N4
Using prescribing very short answer questions to identify sources of medication errors
R Wilson, A Sam, C Fung, E Peleva, D Kluth, M Lupton, D Owen, C Melville, K Meeran
Imperial College London

Background:
Prescribing errors are a major source of patient harm and health economic burden. It is estimated that there are approximately 237 million prescription errors per annum in England, contributing to 22,000 deaths per year and costing the National Health Service up to £1.6 billion pounds per annum (1). With such high stakes, it is crucial that undergraduate medical education prepares graduates to prescribe competently in a challenging work environment. However, many graduates’ report that they lack confidence in their prescribing abilities, with only 29% of UK students feeling assured in their ability to achieve the GMC’s prescribing competencies upon graduating medical school (2). The single best answer (SBA) questions commonly used in undergraduate assessments do not test the students’ true ability to prescribe, nor do they provide insight into the potential prescribing errors made (3). The Objective Structured Clinical Examination (OSCE) can test prescribing skills, but is limited in its scope. Workplace-Based Assessments (WBAs) can also assess prescribing skills but undergraduates’ ability to be observed prescribing is restricted with the advent of electronic prescribing. There is therefore a need to develop a means of formative assessment that facilitates learning by assessing students’ ability to prescribe across a broad sample of the undergraduate curriculum. We developed a new online tool to allow assessment of prescribing skills using the prescribing Very Short Answer (VSA) format and compared its utility and ability to identify prescribing mistakes compared with the conventional SBA format. Furthermore, by identifying the types of error students’ make and areas of weaknesses in prescribing, the medical school curriculum can be adapted and improved. Identifying these deficiencies andremedying them is essential for both patient safety and a health economics perspective.

Methodology:
Final year students from two UK medical schools were recruited to sit a two-part prescribing assessment. Both parts included the same 50 clinical scenarios. In the prescribing VSA format, the students were asked to write the correct prescription with access to the British National Formulary. Subsequently students were asked to select the best answer from a list of five options in the SBA test. Both formats were marked electronically and two examiners reviewed and verified incorrect VSA responses.

Results:
364 students sat the assessment. 18,200 prescribing VSA questions were marked and verified in 91 minutes. The median percentage score for the VSA test was significantly lower than the SBA test (28% vs 64%, p<0.0001). Significantly more prescribing errors were detected in the VSA format than the SBA format across all domains, notably in prescribing insulin (96.4% vs 50.3%, p<0.0001), fluids (95.6% vs 55%, p<0.0001) and analgesia (85.7% vs 51%, p<0.0001). Of the incorrect VSA responses, 33.1% were due to the medication prescribed, 6.0% due to the dose, 1.4% due to the route and 4.8% due to the frequency.

Discussion:
Although prescribing skills are widely assessed through a variety of means in the undergraduate curriculum (4), until now there has not been an accepted method of assessing students’ ability to generate an authentic prescription on a large scale. Prescribing VSA questions represent an efficient and acceptable tool for providing detailed insight into the sources of significant prescribing errors, which are not identified by SBA questions. The rich feedback that can be derived from analysis of the sources of error that students make, can be utilised to inform and improve the undergraduate curriculum. This makes the prescribing VSA a valuable assessment tool to enhance and support students’ skills in safe prescribing, and to reduce prescribing errors.

References:
360 Degree Patient Encounters Using Virtual Reality Technology
J Ross, C Jacobs, D Finnergan, A Pereira
Swindon Undergraduate Academy (Great Western Hospitals NHS Trust)

Background:
Multimedia recordings of patients are used widely in medical schools to provide authentic representations of clinical encounters. Video technology gives the potential for medical students to be ‘virtually’ immersed in the clinical environment. 360° video presents the virtual patient encounter in an affordable and accessible headset, allowing the viewer to concentrate on any aspect within the 360° recording. Emerging evidence shows a positive correlation between 360° video and participant experience (1,2), however, there is a lack of evidence assessing this technology and its utility. The purpose of the pilot study was to determine feasibility and methodology with application of new multimedia modality to health professional education. These videos can be captured without the need of expensive video equipment.

Methodology:
Our initial pilot study involved 5 medical students, non-randomised. Group 1 (N=2) viewed a clinical consultation on a traditional screen, group 2 (N = 3) viewed the same consultation using 360° video while wearing the virtual reality headset. Participants subsequently completed questionnaires. The measures used were the Immersive experience (IEQ) and intrinsic motivation questionnaires (IMQ) as well as gyroscopic data from headset. 2 Participants from group 2 were selected for interview and responses were collated using google forms.

Results:
Pilot data: IEQ immersion validity Pearson correlation 0.88 (p 0.05). In group 1 the IEQ total score mean was 72.50 (SD 4.95) and the IMQ total score mean was 52.00 (SD 2.83). In group 2 the IEQ total score mean was 88.00 (SD 6.08) and IMQ total score mean was 61.33 (SD 8.50). Candidate movement was recorded as a gyroscopic dispersion coefficient of 7.83.

Discussion:
The pilot data has demonstrated feasibility of the study and preliminary findings showed increased immersion with 360° video viewing with comparable intrinsic motivation levels within the two small groups. Adapted IEQ level of immersion was validated for the purpose of this study. Numerous adaptations were learnt to improve study protocol and construct, which will include; a questionnaire to test attention and recall as well as qualitative data. We intend to repeat the refined study with 28 participants to increase the validity of the results. Our key message is that adoption of new technology in medical education requires careful evaluation prior to expanding and delivering to medical students.

References:
A spoonful of sugar doesn't help the medicine go down: an evaluation of student enjoyment and self-rated understanding of four commonly used teaching methods
K Sales, A Beverstock, C Lewis, S Rowlands, A Kelly
Bristol Royal Hospital for Children

Background:
When choosing a teaching method, it would appear important to maximise student enjoyment to facilitate maximum teaching: teaching must be enjoyable enough to encourage students to engage, while also improving their knowledge efficiently. Though there is no evidence that matching a student to their learning style improves their learning [1], students often vary in how much they enjoy being taught using different teaching methods [2]. There is a disconnect between the teaching methods that students report enjoying and those that improve their knowledge the most: a previous study showed that lectures were disliked by students but were the most effective method of learning [3]. We aimed to discover if this research from 1975 holds true, and determine whether it applied to modern teaching methods rather than just to lectures.

Methodology:
33 medical students on their paediatrics block were given four teaching sessions on paediatric emergencies. Each teaching session was delivered using one of four commonly used teaching methods (PowerPoint, a facilitated group discussion, an online quiz and teaching using a simulation manikin). Two teaching sessions for each teaching method were created, on different topics, and half the students participated in each session. After all the sessions had been delivered the students were asked to rank the teaching methods in order, to indicate how helpful they found the teaching method in helping them to understand the material and how enjoyable they found the format.

Results:
Students overwhelmingly found an online quiz to be the most enjoyable way to learn of the four methods. 24 of the 33 students (72%) said that they ‘strongly agreed’ that the quiz was an enjoyable way to learn, and 32 of the 33 either ‘agreed’ or ‘strongly agreed’. This is compared to only 48% of the students who ‘agreed’ or ‘strongly agreed’ that PowerPoint was an enjoyable way to learn (p<0.05) Students had broadly positive attitudes towards teaching using a simulation manikin and group discussions but were less likely to ‘strongly agree’ that the teaching was enjoyable compared to the online quiz (p<0.05). As a group, the students ranked the online quiz as their preferred method of teaching of the four, followed by the teaching using the simulation manikin, then by group discussion. PowerPoint was the least preferred method of teaching. Despite enjoying the online quiz more, students reported that PowerPoint made the topic easier to understand (85% agreed or strongly agreed) than for the online quiz (only 70% agreed or strongly agreed). This data was not statistically significant due to the small sample size.

Discussion:
This pilot study of 33 students shows that students enjoy online quizzes more than PowerPoint presentations but did not feel that online quizzes made the information easier to understand. Contrary to what is often assumed, students do not necessarily feel that enjoyable teaching methods make the information the easiest to understand. When asked to choose between teaching methods, students have a preference for teaching methods that are enjoyable over those that make the material easy to understand. An extension of this study with a further 98 medical students is underway: results from this will be presented.

References:
A Sustainable Model for Undergraduate Surgical Education - The Peer-assisted Surgical Skills for Students Course

TSM Chu
Newcastle University

Background:
The Royal College of Surgeons (RCSEng) and General Medical Council (GMC) have specified a set of surgery-specific outcomes for medical graduates (1,2). They include outcomes such as skin suturing and the use of local anaesthetics. However, research have suggested that medical schools in the UK often provide minimal training in surgical and procedural skills (3,4). We aim to evaluate how a Surgical Skills for Students (SSS) course could improve the knowledge, competency and confidence of medical students in surgical skills. The secondary aim is to introduce a sustainable model utilising the SSS course to enhance continuity and better equip students with the essential skills as defined by the RCSEng and GMC.

Methodology:
A peer-assisted SSS course comprising of two workshops led by junior doctors and senior medical students were conducted in 2018 in a regional teaching hospital. Three surgical Skills (suturing, knot tying, laparoscopy) and other procedural skills were covered. The second series of the SSS has been planned in at least two regional teaching hospitals in 2019, with medical student helpers recruited to co-organise the course at each site. A system is developed where previous SSS attendees would participate in teaching the next series. Questionnaires were sent to participants to record pre-course and post-course mean knowledge and confidence scores. The t-test (independent samples and paired samples) was used to compare the mean scores to establish statistical significance. A five-point Likert scale was used to capture additional feedback.

Results:
23 students attended the first series of the SSS course. Only 26.8% of participants reported that they had formal teaching within the curriculum on the three surgical skills on average. Significant improvement in the mean self-reported confidence scores in suturing (+3.5, p<0.001), knot tying (+4.7, p<0.001), and laparoscopy (+4.3, p<0.001) were recorded. All participants reported an improved knowledge in suturing and laparoscopy. We are currently awaiting results for the second series of the course.

Discussion:
The undergraduate curricula do not provide sufficient surgical training. Peer-assisted courses such as the SSS are tenable and effective in enhancing knowledge, confidence and interests in surgical skills amongst medical students. We implemented a sustainable model where SSS attendees could participate in organising and teaching the next cohort. Moving forward, we hope to assess the long term effects of the course on both participants and peer teachers, in terms of both skill levels and career aspirations.

References:
Active teaching methods are the best adjuncts to simulation: results from a pilot study of 33 students
A Beverstock, K Sales, M Fenton-Jones, C Lewis, S Rowlands, A Kelly
University Hospitals Bristol NHS Foundation Trust

Background:
Simulation is a widely used teaching tool in undergraduate medical education. Previous research has shown that skills and knowledge learned in simulation are applicable to real patients[1]. Simulation allows learning in a protected risk-free environment[2], and thus is an ideal teaching tool to allow students to manage unwell ‘patients’. This experiential learning[3] gives students the opportunity to put their theoretical knowledge into practice. Students thus have an opportunity to learn about the management of emergencies, both through participating in the simulation scenario and through formal post-simulation teaching about the assessment and management of unwell children. No research has previously been carried out to assess which method of post-simulation teaching best supplements the knowledge gained in the scenario. A pilot study was carried out to determine which method best helped medical students to learn about the management of paediatric emergencies in order to help guide best teaching practice in the future.

Methodology:
A study was designed to run alongside the simulation teaching to fourth year undergraduate medical students on placement at the Bristol Royal Hospital for Children. Four sessions were run in our pilot study for 8 students at a time. Four scenarios were run on each day covering common paediatric emergencies commonly seen by junior doctors: an asthma exacerbation, dehydration, seizures and sepsis. The teaching methods were chosen to reflect common teaching methods used in undergraduate medical education. These were PowerPoint, group discussion, an online quiz (Kahoot!TM, a free online quiz app) and hands-on teaching with props and a simulation manikin. Two teaching sessions were devised for each subject and one of each teaching method was delivered to the students in each session. Each scenario-teaching method pair was also completed at different times of day. The medical students were asked to fill in a free-text answer quiz at the start of the day to assess their knowledge of paediatric emergencies. They were then asked to complete the same quiz at the end of the day to assess whether their knowledge had improved as a result of the simulation and teaching.

Results:
The results showed an improvement in student quiz performance following simulation and any form of teaching method compared to baseline (79% correct after teaching vs 52% correct before, p<0.01). Students who were taught using the online quiz demonstrated a greater improvement in correct answers (45.8% improvement in score, p<0.05) than the other methods. PowerPoint was the least effective method of teaching of the four tested, resulting in only a 22.4% improvement in score (p<0.01).

Discussion:
The data from this pilot study suggests that use of an online quiz to supplement simulation teaching results in the greatest improvement in student knowledge. PowerPoint was the least effective of the four teaching methods used, resulting in the least effective retention of knowledge when compared to more active methods of teaching. It appears that more active forms of learning with high levels of interactivity result in more effective teaching after simulation. Using active learning methods rather than passive lectures matches the active learning from the simulation: this may explain its effectiveness. After a highly active simulation session, it may be that students require interactivity to learn effectively. In future, medical teachers should consider using active methods of teaching such as interactive online quizzes following simulation to reinforce the knowledge gained during the scenarios rather than a PowerPoint lecture.

References:
Ageing Suits in Undergraduate Medical Education: learning by standing in the patients' shoes
C van't Hoff, L Webb, C Timms, C Ashton, K Jones, A Ipe
Great Western Hospital

Background:
With an ageing population and increasing pressures on the National Health Service, there is a need to continue prevention of ageism and negative attitudes towards older adults(1-3). Both the NHS and medical education needs to counter this, requiring students to literally ‘put themselves in someone else’s shoes’ to gain insight into the functional effects of ageing. Exposure to elderly care is increasing to match the increasing age of the population: The new internal medicine training curriculum has recently changed to reflect the importance of elderly care, with all trainees undertaking a compulsory elderly care job. Many students have experience of the elderly population - through both hospital and community placements. We hope that students having personal experience of the effects of aging will help them improve their empathy skills and help them gain an appreciation for the multifactorial aspect of many geriatric presentations.

Methodology:
The Swindon Academy of Bristol University uses ageing suits - consisting of weights around wrists and ankles, goggles limiting vision and a torso restricting truncal movement - to teach about functional limitations of ageing. Over the past two years, we have worked around the theme of ‘A Trip to the Day Centre’ with the fourth-year medical students. We timed students completing five typical instrumental activities of daily living (IADLs) with and without ageing suits. They also completed a pre- and post-workshop survey to explore their attitudes towards ageing and their estimations of time taken to complete each task.

Results:
Students took a longer time to complete each activity while wearing the ageing suit which was statistically significant (p=0.012). The most statistically significant changes were picking up a tablet and tying shoelaces, and the least significant were seen when getting in and out of a car, and when going up and down stairs. Thematic analysis of free text answers emphasised the usefulness of the novel approach and highlighted attitudinal changes of the students including mentions of empathy. There was also improved insight into limitations of ageing. Likert scales analysis demonstrated statistical significance with regards to student’s “surprise at the increased length of time taken to complete activities of daily living (ADLs)”, “a better understanding about the difficulties faced by older patients”, and “endeavours to allow more time and not get frustrated when examining patients” (p=0.033). The highest statistical significance (p=0.002) was students agreeing the experience should be offered to all healthcare professionals.

Discussion:
The students expected the most significant change in time to be when tying up shoelaces, which was reflected in the analysis. This likely reflects real-life situations as, compared to other tasks, it involves flexibility, gross and fine motor skills and eyesight. The least significant change was while getting in and out of a car, and going up and down stairs; however, this may not be consistent with real life as older people may have coexisting balance impairment. Timing older people to complete the tasks would allow further exploration of this. We have attempted to minimise variables in the sessions but some, including location where the sessions were held, were altered due to factors beyond our control. Ensuring each task is completed in the same way adds reliability to results and analysis. All students agreed that elderly people face difficulties with ADLs and IADLs and they appreciated an interactive workshop to explore this. They enjoyed the ability to carry out tasks and agreed that they would endeavour to have more patience with the older population in the future; indicative of attitudinal realignment at Kirkpatrick level 3 (4). An interactive ageing workshop is beneficial for promoting empathy with older patients and insight into their mobility problems. We hope to expand our results and plan to introduce the workshop into postgraduate teaching.

References:
Analysis of the undergraduate medical student experience in a dedicated inner city community paediatric teaching clinic in Leicester
SK Ghosh, M Duff
Leicestershire Partnership Trust and Leicester Medical School

Background:
The Community Paediatric (Year 4/5) undergraduate medical student placement was expanded in 2012 with the development of tutor-supervised, student-led teaching clinics. Aims were to allow active involvement in patient assessment and management following the apprenticeship model of clinical medical education. With a significant increase in Leicester medical school student numbers in Autumn of 2018, it was decided to temporarily increase the number of teaching clinics. This provided an opportunity to gather qualitative data relating to student experience, impact on knowledge and future medical practice.

Methodology:
Clinics were held in an inner city area. The patient case mix was representative of general community paediatric clinics e.g. behavioural and neurodevelopmental cases. Appointment times were increased from 30 to 60 minutes. Student to tutor ratio was either 1:1 or 2:1. Students were expected to carry out an appropriate history, examination and to participate in problem solving, decision-making, and patient management. Following the clinic, students completed a structured feedback questionnaire, rating the quality of the teaching experience (Likert ratings from 1 - poor/strongly disagree to 5 - excellent/strongly agree) and also provided qualitative subjective feedback about learning points, and how these would help in future independent practice.

Results:
A total of 6 students attended the teaching clinics between September and December 2018. All 6 gave a global response of 4-very good or better for all of the questions asked. Average scores given:

- How did you feel about the format of this teaching clinic? 4.7
- Did you feel the time allocated per patient was appropriate? 5
- Did you feel the choice of patients was appropriate? 5
- Did you see an appropriate range of cases? 4.6
- How did you feel about the support/guidance offered by your tutor? 5
- Did you feel this clinic helped improve your readiness for independent practice? 4.8

Qualitative feedback regarding beneficial aspects of the teaching clinic included: Time to discuss cases, more confidence, expanding knowledge, improved communication skills, being part of the team

Specific knowledge or skills that students felt they had gained from the teaching clinics included: Paediatric history-taking (ADHD, ASD, sleep), examination skills, controlled drug prescription, dictation skills

Discussion & Conclusions
Students gave average weighted Likert responses in the very-good to excellent range for all aspects of the teaching clinics including increased confidence for future independent practice. Students developed:

- Experience and confidence- The importance of experiential learning, reflection and critical thinking by medical students cannot be underestimated - “Novices develop into experts by incrementally acquiring skills that depend on accruing experience” (1).
- Knowledge/Diagnostic reasoning – Students described discriminatory questioning allowing formulation of diagnostic conclusions so developing diagnostic reasoning skills.
- Practical skills – such as writing out a controlled drug prescription and carrying out dictations for the first time.
- Sense of belonging – the feeling of facilitated ownership of patients and safety in learning has also been described as important elsewhere, such as in a novel student led physical therapy clinic in Alberta, Canada (2).

Feedback suggests that increased teaching time in clinics would be beneficial. Balancing service provision against the quality of the teaching experience must be carefully considered. A significant limitation of this analysis was a
small student data set, mainly due to student non-attendance, timetabling difficulties and patient non-
attendance. Whilst more data would help prove validity and further analysis of student experiences between
standard clinics and teaching clinics would provide further evidence of benefit for this method of teaching, we
hope to improve future clinical practice by increasing teaching clinics within our service.

References:
1. Maudsley, G and Strivens, J. Promoting professional knowledge, experiential learning and critical thinking for medical students. Medical Education 2000;
Apple TV: bringing group working back into group work?
N Lander
University of Leicester

Background:
It has long been recognised in medical education that “peer to peer” or “near peer” learning is an important part of undergraduate learning. Studies have demonstrated that closeness in knowledge level gives an insight into difficulties that more experienced faculty often can’t understand (1,2) as well as providing the opportunity for student tutors to begin to articulate their knowledge. As well as this, there is an expectation that Tomorrows Doctors will provide a teaching role to their future students and so it is helpful for them to develop these skills early on in their careers (3). The Leicester Medical School is just one of many schools who use peer to peer learning as an essential learning part of the curriculum with students being randomly allocated due to their Belbin characteristics in their first week (4). These students then need to find a way for working as a group that is effective for them. An issue that is commonly encountered is ensuring that they work through questions together and use each other as resources as opposed to just relying on their personal devices and Google. All group work sessions are completed via iPad devices with Apple TV available to all groups for use at their discretion, however until recently the students have not accessed the Apple TV technology. In view of the increased observed distractions that can be encountered whilst working on iPads, there is significant encouragement from Teaching faculty to bring collaborative learning back into group work. By asking one student per group to project the questions via Apple TV, could group work be encouraged to be more collaborative again? Can the use of the Apple TV as a collaborative learning tool aid group work and group working dynamics?

Methodology:
Following the suggestion of using Apple TV to four Belbin groups across two cohorts (first and second years), n= 32, data was collected via questionnaire and focus group. Questions concerned how the students had incorporated Apple TV into their learning, how they felt it had changed group dynamics, whether they had found it beneficial and how they would advise other groups on how to use Apple TV.

Results:
All of the groups had incorporated Apple TV into their learning in the same way with group work being projected by one person who then acted as “chair person” for that group work session. They ensured that the group kept on task as well as collaborating all resources together. There was variation amongst students with some groups having the same “chair person” each session and others changing each day. There was also variation in how the rest of the group did the work involved, with some groups having a single person that wrote and then shared the resources and other groups preferring that everybody wrote their own answers. A consistent theme amongst all the groups was the benefit of pacing that the method conferred as well as a feeling of improved group dynamics. More detailed analysis of opinion is ongoing.

Discussion:

References:
(3) AJ Batchelder, HV Morris, AM Hastings, RT Hsu. Does allocating students to study groups according to preferred team roles improve academic performance? Poster at ASME 2012 Annual Scientific Meeting, Brighton.
Bleep simulation: a novel way to prepare final year medical students for transition to F1?
LJ Edwards, B Hedley-Davies
Hywel Dda University Health Board

Background:
The General Medical Council calls for final year medical student education to “increase preparedness for practice as an F1”(1). This is generally achieved by “assistantships” and “shadowing” placements, as well as teaching themes and concepts specific to starting clinical practice. Simulation-based education is being increasingly used to provide a learning environment that is safe for both student and patient whilst delivering a realistic clinical experience. Bleep simulations have been trialled previously for medical emergency scenarios with good results(2). However, it has been reported that new F1s often struggle with the new responsibility, reduced support and increased uncertainty that accompanies this change from student to doctor(3). This bleep simulation has been designed to replicate the daily variety of scenarios experienced by an F1 doctor, ranging from simple, over-the-phone advice to simulated acute scenarios that students need to physically attend and manage. This is a novel, high-fidelity method of preparing final year medical students for the transition into F1.

Methodology:
Final year medical students from Cardiff & Swansea medical schools placed at two hospitals in Hywel Dda Health Board are invited to take part in a one-day bleep simulation course. Students hold a hospital bleep from 9am-5pm whilst continuing with their assistantship duties. At various times over the day, an assigned F1 doctor bleeps them with scenarios representative of those an F1 would receive over the course of the day. Bleeps range from simple advice (e.g. to give glucogel to a patient with low capillary blood glucose) to simulated acute scenarios (e.g. managing post-operative wound site sepsis). Students are issued with questionnaires before and after the bleep simulation to assess levels of confidence and preparedness for F1. Focus groups are being held to discuss students’ experiences and evaluate the course.

Results:
This study is ongoing, but results from 9 questionnaires so far reveal that all students find the blee p simulation a useful and realistic exercise for preparation for F1. Students have also reported that the course increased confidence and reduced concerns with regard to holding and answering bleeps. As the study progresses, we are expecting further questionnaires and the focus groups to reiterate these points and provide insight into what can be improved. This study is looking to recruit >30 students over the rest of the 2018/19 academic year.

Discussion:
Results from questionnaires, so far, show that final year students enjoyed the bleep simulation and found it useful in helping to improve confidence in answering bleeps as well as feeling more prepared for F1. We are expecting to yield similar results from further questionnaires and focus groups. This project has demonstrated that the bleep simulation is a useful, high-fidelity course that can be feasibly introduced into final year clinical placements as a supplement to current teaching and “assistantship” clinical placements.

References:
2. Watmough S, Box H, Bennett N, Stewart A, Farrell M. Unexpected medical undergraduate simulation training (UMUST): can unexpected medical simulation scenarios help prepare medical students for the transition to foundation year doctor?. BMC Medical Education. 2016;16(1).
‘By choice, not by chance’ - two years on: What has been the response at medical schools to raising the profile of GP as a career?

J Cullen, H Alberti, J Rosenthal
Newcastle University

Background:
In 2016, the Medical Schools Council and Health Education England published a joint report chaired by Professor Val Wass “By choice - not by chance: Supporting medical students towards future careers in general practice”[1]. Within the report they listed 15 recommendations for various stakeholders, including HEE, MSC, RCGP and medical schools to take forward to raise the profile of General Practice as a career to medical students. They concluded that “the future of general practice is exciting and has the potential to offer the challenges and flexibility of experience many students want. It is the responsibility of all those delivering undergraduate education to ensure medical students are supported to recognise this. Failure to do so will result in a workforce unprepared for future patient needs.” We aimed to explore the views of GP Heads of Teaching (HoTs) at UK medical schools as to whether and how the report had supported them in raising the profile of GP to their medical students.

Methodology:
All GP Heads of Teaching (HoTs) at UK medical schools were emailed in December 2018 to respond to a brief survey asking whether and how the report had supported them in raising the profile of GP to their medical students.

Results:
23 medical schools responded (response rate 70%). The overwhelming feeling was that the Wass report has been hugely influential in helping the promotion of general practice as a career option to medical students. There was a strongly shared view that that the report has enabled medical schools to engage with key regional stakeholders including GP training schemes and RCGP faculty boards, as well as HEE, NHSE and the MSC. Since its publication it has framed both national and local debate, raised high level awareness and provided evidence to support local developments to raise the profile of general practice at medical school level. In this way, the report has been a positive political tool and has helped implement curriculum change. Responders gave one or more examples of initiatives that have been undertaken within their schools. These have been grouped within the overarching themes of access and exposure to enthusiastic role models including GP trainees, tackling undermining of GP as a career, raising the profile of academic general practice, providing engaging and informative careers advice and guidance, work experience and widening participation, recruitment and selection involvement, teaching and curriculum change, and supporting and empowering student-led activity.

Discussion:
Although increasing recognition of the importance of teaching in primary care is still challenging at times, the consensus is certainly that progress is being made. Even if not specifically mentioned, it was felt that the Wass report has contributed to a general shift in thinking. We report a number of initiatives that have been undertaken by medical schools in line with the Wass report recommendations. Whilst some initiatives were being considered already, the report may have helped to secure their approval and provided momentum.

Board: P6
Can we train preclinical medical students to provide adequate feedback to clinical students in a formative OSCE?

I Mandal, L Nagib, L Tiffen, G Johnson
UCL Medical School

Background:
Mock OSCEs are an invaluable educational tool for clinical medical students. However, recruitment of experienced examiners, and funding professional actors, is often problematic due to many institutions focus on ensuring summative OSCEs run with appropriate support. Standardised patient encounters, where lay people have been trained to examine, have been used in many OSCE-style examinations across the world (1), and in some cases, parallel the experience provided by doctors (2). We aimed to assess whether it would be possible to train preclinical medical students to become actors and examiners in order to facilitate the organisation and smooth running of formative clinical examinations.

Methodology:
A formative OSCE was created for fourth year medical students at UCL Medical School. Out of 12 stations, we identified 4 where training preclinical students to an adequate standard would be possible. This included history taking and data interpretation, where fewer subjective judgements were expected by the examiner. Preclinical students were sent written materials and underwent a one-hour face-to-face training session in preparation for their role. Feedback was then collected from the preclinical examiners, as well as from candidates, in the form of online surveys. A 6-item online survey was sent to the preclinical students. Respondents were invited to ‘strongly agree’, ‘agree’, ‘disagree’ or ‘strongly disagree’ with a series of statements about the training they received and their ability to examine candidates on the day. A similar 7-item survey containing statements about the content and organisation of the OSCE was sent to the candidates. Free text comments were invited in both surveys.

Results:
A total of 74 candidates out of 329 (22%) responded. Candidates valued the use of clinical medical students and doctors (100% ‘agreed’ or ‘strongly agreed). The use of preclinical students as actors (80% ‘agreed’ or ‘strongly agreed’) and examiners (51%) was less well received. Free text comments showed that candidates felt preclinical examiners were more lenient, and that they were underprepared to show them how to correct their mistakes. A total of 45 preclinical students were trained, with 15 scheduled to be examiners. A total of 27 students (60%) responded, 12 of which were examiners. Examiners generally felt that the training prepared them for this role (67% ‘agreed’ or ‘strongly agreed’), and that they were comfortable giving feedback (70%). Almost all agreed that the written materials were useful (96%). The majority agreed that the training session was useful (68%). Free text comments indicated a need for more specific guidance on how to mark common mistakes for that station. For example, examiners struggled on how to award marks for candidates who asked about symptoms in a slightly different way. Examiners also would have liked more training on how to provide feedback.

Discussion:
Preclinical students have the potential to be trained as examiners for certain stations in a mock OSCE. High quality training is required to ensure that their feedback parallels that of senior medical students and doctors. A combination of written material and seminars proved useful. However, the seminar should include demonstration of a strong and a weak candidate, as well as an explanation of the examiner’s thought process. Additionally, formal training in providing feedback would enhance the preclinical students’ ability to examine, as well as giving students with a long term advantage for their clinical years. However, there are potential barriers to the use of preclinical examiners. A lack of clinical experience may limit the quality of feedback, and further work is required to determine the stations that examiners can be adequately trained for. Additionally, junior students may not feel as comfortable providing critical feedback to older students. This was not found in our study, although a highly motivated cohort of preclinical students were selected.

References:
Charity Begins at Home: Using Placements in the Third Sector to Improve Students’ Exposure to Marginalized Populations
L Webb, L Ting, F Charlton, A Demetri, R Webster, K Jones
Bristol University

Background:
In recent years, there has been a move within medical education towards holistic care to reflect increasingly complex needs of patients. However, marginalization remains a separate determinant of health and social disadvantage(1). Traditional undergraduate courses typically focus on biomedicine and more work is required to emphasise the importance of the biopsychosocial factors influencing health and disease in the context of a changing society(2). The Swindon Academy at the University of Bristol has a history of involving charities in gender-based violence simulation training, which expanded into a Medicine in Society Student Selected Component (SSC) in 2017. During its inaugural year, students experienced placements in mental health, refugee health, and Lesbian Gay Bisexual Transgender Queer Plus (LGBTQ+) charities; this expanded the compulsory training in psychiatry and offered previously-recommended experience of LGBTQ+ and refugee health issues(3,4).

Methodology:
Student placements with between one and three third-sector organisations occurred over a two-week period with a range of experiences. At the end of the placement period, students completed surveys to evaluate the SSC. The survey comprised of five-point Likert scales related to an overall rating of the SSC and each charity placement. Further scales were used to ascertain whether students agreed with statements regarding how inclusive the placement was, whether participation was encouraged, and whether there were opportunities for shadowing and interaction with patients. In addition, free text boxes were employed for descriptions of placement activities, as well as the most and least positive experiences, and any attitudinal change associated with the placement.

Results:
The surveys had a 100% response rate. 87.5% of students rated the overall experience as good or excellent, which was statistically significant (p=0.014). Common themes within the higher-rated placements included client interaction, approachability of staff, and inclusive activities. The main area for improvement was timetabling concerns. The highest-rated placements had opportunities for interaction with staff and clients and the students were made to feel welcome on their arrival, demonstrating statistically-significant, strong positive correlation (Pearson’s correlation coefficient 0.849, P=0.002). 100% of students reported attitudinal change secondary to their placements. The main themes following thematic analysis were a reduction in stigma associated with societal marginalization, an increase in compassion and empathy, more insight into the importance of their role as future doctors, and better knowledge of the organisations they can signpost patients towards.

Discussion:
Evaluation of the SSC has clearly demonstrated an unmet need for interaction with third sector organisations, with evidence at Kirkpatrick levels 1-3 of enjoyment, better knowledge of available organisations and attitudinal change(5). From the high ratings of the SSC and thematic analysis of responses, it can be inferred that the placements are addressing an unmet need in undergraduate medical education. There is also a potential for further analysis into the financial benefit of such placements and whether universities may be able to save money by utilising such placements for their students. The SSC will be expanded upon during academic year 2018/19 to include organisations working with gender-based violence, child safeguarding, homeless healthcare, drug and alcohol misuse, and vulnerable adults to provide more comprehensive exposure to these populations. Students will also attend a Social Policy workshop to improve their knowledge of the research that informs decision making and we will host the inaugural Medicine in Society Conference in Swindon for healthcare students and professionals, culminating in further simulation training for the medical students.

References:

Consultant attitudes towards undergraduate medical student teaching
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University of Birmingham

Background:
Medical education in England is undergoing changes, both in terms of numbers of students and curricula. The number of medical students has been rising, in line with the Government’s plan to increase the number of training places by 1,500 by 2020, and new medical schools have been created to facilitate these extra students. Increasing the number of students requires senior hospital doctors to take on or increase existing, teaching duties when they already face significant demands in terms of delivering clinical services and training junior doctors and other staff. There is only limited evidence available on how these changes within medical education are affecting hospital doctors, and very little is known about factors that impact upon willingness and capacity to engage in teaching medical students. A systematic review was carried out to evaluate the current body of evidence available on factors influencing senior hospital doctors’ attitudes towards teaching.

Methodology:
Standard systematic review methodology was followed. A comprehensive search of electronic databases (MEDLINE, and EMBASE) from inception was conducted to identify studies exploring senior doctors’ attitudes towards teaching undergraduate medical students. Two reviewers independently carried out key methodological steps such as study screening and selection, quality assessment, and data extraction. A narrative synthesis was undertaken.

Results:
Six studies were included in the review (1-6). A total of 1,204 consultants were included in these studies which dated from 2000 to 2015. Two of the studies used questionnaires (1,3), one used a questionnaire and focus groups (6), and three used focus groups/semi structured interviews (2,4,5). Five of the studies took place in hospital settings (four in the UK (1,3,5,6) and one in Australia (2)) and one was based at a UK medical school (4). Two key findings were evident across all six studies - firstly, that consultants generally found teaching undergraduate medical students enjoyable, and secondly, the consultants identified time constraints as a barrier to their teaching. Other findings supported by the majority of studies were that consultants felt there was a lack of recognition for the time spent teaching (1-3,5,6), and that there was a lack of training/guidance regarding teaching students (2,3,5,6).

Discussion:
This is the first systematic review to explore senior hospital doctors’ attitudes towards teaching undergraduate medical students. Despite these six studies spanning 15 years, the same attitudes towards and issues regarding teaching are identified by all, suggesting that in particular lack of time is a persistent problem regarding consultant based teaching. An anecdotal impression is that consultants are no longer as enthusiastic about teaching as they once were, but it is evident that over the 15 years of these studies, enjoyment levels, and presumably enthusiasm, have not changed significantly.

References:
5. Seabrook MA. Medical Teachers' Concerns About the Clinical Teaching Context. Medical Education 2003;37:213-23.

Board: P9
Cross-site interprofessional simulation for medical and pharmacy students

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Background:
Undergraduate simulation based education (SBE) embodies a variety of interactive, experiential learning techniques that include standardised patients (actors), screen-based computer programs, part-task trainers and high fidelity mannequins.(1) All of these modalities allow students to acquire procedural, technical skills through repetitive practice in safe environments. Simulation can also support the acquisition of non-technical skills such as communication, leadership and teamwork. Although simulated scenarios are a highly effective educational tool, using it in groups of professionals exclusively from the same background is not a realistic representation of clinical practice. Simulated scenarios for groups from mixed professional backgrounds offers the opportunity for improvement of teams, not just individuals. Interprofessional Education (IPE) occurs when “two or more professions learn, with, from and about each other to improve collaboration and the quality of care.”(2) IPE improves students’ attitudes towards teamwork and has led to gains related to professional practice and patient care.(3,4) Research suggests “the use of clinical case simulations is among the most effective methods for facilitating interprofessional teamwork.”(5) The three healthcare faculties of the University of Bristol Medical School, University of Bath School of Pharmacy and University of West of England Department of Nursing are within close geographical location. Despite this, opportunities for IPE have been limited due to the spread across three different universities. September 2017 saw the phased introduction of a new undergraduate medical education curriculum for University of Bristol with a greater emphasis on IPE. At present, the focus of the current evidence supporting IPE has predominantly featured medical and nursing students. The purpose of this study was therefore design SBE scenarios for undergraduate medical and pharmacy students prior to the formal introduction of IPE scenarios for all three faculties within the new curriculum in the 2019-2020 cohort.

Methodology:
Freeth et al proposed that IPE intended learning outcomes (ILOs) should be based around attitudes, knowledge and skills.(6) To address student attitudes ILOs should focus on appreciating the value of IPE education and awareness of other professionals’ view. For knowledge, ILOs should address understanding each other’s professional roles and the skills and competencies associated with that profession. Finally, ILOs addressing skills should focus on effective communication with students from other professions and identification of clinical situations whereby professional collaboration enhances patient care and professional working. A SBE scenario was developed on the assessment of a patient with Parkinson’s Disease who required their medication to be prescribed as a Rotigotine patch. Final year medical students assessing the patient would therefore need to discuss the scenario with an on call final year pharmacy students for advice. To incorporate an emphasis on communication the scenarios will be run cross-site with students communicating via telephone. The Readiness for Interprofessional Learning Scale (RIPLS)(7) will be used as a pre and post-scenario test of attitudes toward IPE. Debriefing will occur via video conference call.

Results:
36 final year medical students and 12 final year pharmacy students will complete pre and post-scenario RIPLS during the scenarios run in February and March 2019. Results will be analysed and presented at the conference. Feedback from both faculty and students will be used to evaluate and modify scenarios prior to formal introduction in the new curriculum.

Discussion:
Best practice SBE requires participants to be acting within their professional roles and responsibilities. The purpose of this study is to trial cross-site IPE to assess the impact it has on students attitudes towards interprofessional learning specific to medical and pharmacy students.

References:
Developing understandings of peer teaching to inspire future educators
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Background:
Peer teaching is practiced in medicine internationally (1-3). Enthusiasts claim that peer teaching is effective due to congruence between teachers and learners in experience, age, or social standing (4), allowing teachers and learners to easily connect (5). Peer teaching is also important for sustaining educational practices in medicine, as teaching practice may support development of doctors capable of educating future practitioners. Whilst peer teaching has been evaluated using quantitative methods (2, 6), few strive to deeply understand student learners’ opinions. Ledger et al. (7) recently called for a move beyond explanations based on congruence and the peer teacher as “non-expert”. Instead, they proposed that greater attention be paid to the particular context in which peer teaching takes place. Our study positioned the student as the expert on peer teaching by asking how students understand their learning across different peer teaching contexts. We anticipated that this student perspective could open new lines of inquiry on peer teaching. By gathering learners’ opinions, we aimed to uncover assumptions, values and beliefs that informed these views and consider how peer teaching is of benefit to the peer learner. Further knowledge about learners’ perceptions of peer teaching will promote understanding of ways to encourage and inspire future educators.

Methodology:
We interviewed nine participants recruited through a University of Leeds MBChB mailing list, using a semi-structured approach to discuss their different experiences of peer teaching, such as in the context of exam revision and also work-based learning while on placement, perceptions of the benefits and drawbacks of peer teaching, and its place on the curriculum. Peer teachers and learners were interviewed, with the focus of analysis on benefits to the peer learner specifically. We thematically analysed the data using Braun and Clarke’s model of thematic analysis (8), whilst considering existing educational theory. This study was approved by the relevant University of Leeds ethics committee.

Results:
We identified four themes: Relevance of teaching, learning environment, community and motivated teachers. The relevance of teaching theme supported the notion of cognitive congruence and the learning environment theme supported social congruence. The final two themes pointed to peer teachers’ enthusiasm for teaching, which has not been theorised to date in relation to congruence. Interview responses also suggested a collaborative culture in peer teaching, in which students conveyed an attitude of being ‘in this together’ and a willingness to help each other in the medical school community. This study shows that ‘congruence’ means more than being at a similar ‘level’ within a given domain, as the participants explained the value of time spent longitudinally with peers which helped to build relationships. These relationships fostered the sense of community, creating an informal learning environment. Peer teaching was perceived as most effective when delivered in a non-compulsory, opportunistic fashion on placement, by students who were motivated to teach others.

Discussion:
Peers were perceived to have no obligation to teach, which led to enthusiastic volunteers. Enthusiastic peer teachers were also seen to enhance learners’ motivation. This suggests that peer teaching should not be compulsory, or it risks losing this benefit. Our contribution to medical education is not to suggest specific curricular interventions but to raise questions for discussion. If peer teaching is not compulsory, what role does it have in the curriculum? These discussions have led us to explore ways of creating an environment which fosters the emergence of peer teaching practice. The study also provides some support for targeting resources towards developing those students who are most motivated to help others now and in later practice, to ensure this interest in education is sustained.

References:
Do medical students understand the educational value in attending the operating theatre? An institutional report
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Background:
It has been recognised that surgical education digresses from traditional undergraduate teaching methods and thus, medical students have difficulty harnessing its merits (1-3). Operating theatre experience provides a useful educational adjunct to undergraduate teaching, allowing multiple curricula objectives to be met (4,5). Our aim was to establish whether students from a UK medical school understand the potential learning objectives in attending the operating theatre.

Methodology:
A PubMed literature search was undertaken and a validated questionnaire was identified and used in this study (1). This was distributed to University College London Medical School (UCLMS) students who had completed their surgical placements. Questions involved asking students understanding of their learning outcomes from attending the operating theatre and whether they thought their time in theatre was beneficial.

Results:
60 medical students participated. 53.9% of respondents reported that they did not find their time in the operating theatre beneficial (p<0.0001). 93.2% stated that they did not understand their learning outcomes from attending the operating theatre (p<0.0001).

Discussion:
A statistically significant number of UCL medical students did not understand their learning outcomes in attending the operating theatre and as result may not be harnessing the full educational value. The operating theatre has been shown to be beneficial in a number of ways such as consolidating clinical learning as well as educating students regarding the multidisciplinary team, effective teamwork, patient safety and professionalism (7). These are all aspects that have been highlighted as priorities in the GMC outcomes for graduates (6). Establishing clear learning objectives is crucial to facilitating more valuable educational environments (1). This can be extrapolated to the operating theatre which may improve undergraduate surgical learning experiences.

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Does Building a Community Promote Wellbeing within an Undergraduate Medical Education Centre?
C Oliver, A Gosal, C Priest, M Young, L Bowen, Z Brown, P Davies, A Samules
Gloucestershire Academy, University of Bristol

Background:
Medical Education has been shown to have a negative effect on students’ wellbeing.(1) Not only is there a higher prevalence of mental health conditions amongst these students but they are also less likely to seek support if required.(2,3) As part of their clinical medical education, students regularly rotate amongst NHS trusts within their university region. This entails relocating or travelling some distance away from their main university city. This removes students from their established support networks and can increase levels of anxiety and stress. Undergraduate Medical Education Centres therefore have an increased responsibility to support the wellbeing of their students during their clinical placement and to support them within their new community. Gloucestershire Academy, based within Gloucestershire NHS Foundation Trust, acts as an Undergraduate Medical Education Centre for the University of Bristol. The Academy is responsible for over 100 medical students between the 2nd and 5th years of their medical degree. Previous research completed within the Academy has shown that students are apprehensive about moving away from Bristol and that by introducing out of hours activities for the students, this can help improve the collegiate culture.(4) We aim to develop upon this further by creating a ‘wellbeing toolkit’, to build our community and review the effects this has on our students’ overall wellbeing.

Methodology:
A ‘wellbeing toolkit’ was introduced which included the following: additional out of hours activities such as film nights and quiz nights; a ‘random acts of kindness’ reporting system to encourage students and faculty to report any acts of kindness or achievements that they believe merit special recognition; and a monthly newsletter featuring articles from both faculty and students. These interventions were evaluated using a mixed methods approach at the end of each student’s clinical placement. All students were given a questionnaire which utilised both quantitative and qualitative elements. A focus group was also held with our third year students.

Results:
Over 70 students engaged with the wellbeing toolkit during their clinical placements. 31 fifth year students responded to the questionnaire. 100% either agreed or strongly agreed that a sense of community was important to them, with 77% agreeing or strongly agreeing that they had felt part of the Gloucestershire community during their placement. 100% of the students questioned felt that the toolkit had contributed to their overall wellbeing and went onto report that the toolkit ‘made you feel more connected with everyone’ and ‘part of a team’. 16 second year students responded to the questionnaire. 100% responding felt supported whilst on placement and felt the toolkit promoted their overall wellbeing. Some reported that they ‘hadn’t felt stressed about anything’ and others felt that it was ‘a good opportunity to meet students from older years’. The results of the focus group discussion and questionnaires from our third years are awaited.

Discussion:
This ‘wellbeing toolkit’ has positively contributed to our students’ experience whilst on placement in Gloucestershire. Significantly, promoting a sense of inter-year collaboration has been a key factor contributing to this success. It is clear that a sense of community is essential to ensuring students’ wellbeing whilst on clinical placement. Taking students out of their central university environment can be disruptive to their work-life balance and thus their learning may suffer. This study underlines the importance of creating a supportive environment at a local level. Students are able to rely on each other and their tutors to take a holistic approach to their education. We hope that this straightforward intervention to create a sense of community within Gloucestershire Academy will be transferable to other trusts. Our students are more equipped to seek support, enjoy their placement and maximise their educational experience as a result.

References:
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4. Sheppeard R. All work and no play: would establishing a collegiate culture for the University of Bristol Academies improve student wellbeing? International Practitioner Health Summit. The Wounded Healer. October 2018
Eating One's Fill: The Use of Dietician-Led Workshops in Teaching Undergraduate Medical Students about Malnutrition

A Notghi, L Webb, C Van’t Hoff, A Weir, S Rowell, E Keenan, E Lovegrove, M Williams, C Timms, H Best, L Webb, K Jones
Bristol University

Background:
Good nutritional status is directly linked to a reduced global burden of disease and better outcomes (1). Malnutrition or risk of malnutrition in hospitalized geriatric patients is present in 45% of robust patients and up to 93% of frail patients (2). This is despite an overall global trend towards lower mortality due to protein-energy malnutrition (3). The presence of malnutrition can lead to a prolonged hospital stay and a higher risk of readmission when it is not identified and managed early on (4), emphasising the importance of recognition and treatment. Despite this, there are few formal teaching sessions on nutrition within the undergraduate curriculum, which results in lack of confidence in assessing nutritional need and delivering advice (5). This oversight in teaching was identified and a workshop designed to address the subject.

Methodology:
The Dietetics and Nutrition Department at the Great Western Hospital designed a nutrition workshop for fourth-year undergraduate medical students, run monthly by the team and organised during the students’ Geriatric Medicine placement. The workshop included Malnutrition Universal Screening Test (MUST) training, oral nutritional supplement tasting, and teaching regarding feeding tubes. A pre- and post-workshop test was given to evaluate the course at Kirkpatrick Level 2. Survey questionnaires, composed of 5-point Likert scales and free text boxes, were used to evaluate the course at Kirkpatrick Level 3, as well as to address the hidden curriculum.

Results:
All students had received previous teaching about nutrition as either a workshop (67%) or lecture (33%) but rarely by a dietitian. All students felt there was a benefit to involve dieticians in teaching due to their better knowledge of the assessment and management of nutritional status. The students felt that dieticians had more detailed information about supplements and have better knowledge of individualised diets that may be appropriate for patients. The first two workshops demonstrated a statistically significant mean improvement in quiz scores of 36% (p = 0.043). The most enjoyable aspect of the teaching was supplement tasting, and the most useful was the interactive, case-based nature of the teaching session. Analysis of the Likert scales using the Wilcoxon Signed Rank Test demonstrated a statistically significant improvement in self-rating of ‘I can accurately assess a patient’s nutritional status’ (p=0.024) and ‘I am confident in providing nutritional care of patients’ (p=0.039). The students also reported a change in knowledge about the role of doctors with regards to a patient’s nutritional status including assessment using the Malnutrition Universal Screening Tool (MUST) and prescription of nutritional supplements, and a new awareness of a doctor’s role prior to dietician involvement. Thematic analysis also showed acknowledgement of a doctor’s role within the multidisciplinary team. All students (100%) enjoyed the session and agreed that an MDT member should be involved in teaching.

Discussion:
All students agreed that the nutrition workshop was useful for their learning, supported by a statistically significant increase in test performance and self-rated ability to assess nutritional status, demonstrating educational change at Kirkpatrick level 2; in addition, the significant change in confidence in providing nutritional care may have an impact on emotional motivation to provide such care for patients, reflective of a change at Kirkpatrick level 3 (6). There was further evidence of attitudinal change due to an awareness of the doctors’ role prior to dietician involvement. They would recommend the session to other students. We aim to continue the workshops throughout this year and perform a full thematic analysis for the conference. We also aim to repeat the questionnaire six weeks after the workshop to ascertain how well the knowledge is retained.

References:


Board: Q5
Emerging from Failure
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Bath Academy, Royal United Hospital

Background:
No doctor can honestly say that they have not made a mistake throughout their career. The consequences of these mistakes for doctors, patients and relatives vary according to the magnitude of error- from a simple “near miss” to patient fatality. For junior doctors at the forefront of healthcare, exposure to mistakes is almost inevitable; the EQUIP study showed that prescribing errors by foundation trainees were a common occurrence affecting up to 50% of hospital admissions (1). The GMC mandates an open and pro-active culture when reporting such mistakes; indeed there is a positive drive to ensure juniors feel able to communicate errors to their seniors. Yet, the sobering case of Dr. Bawa-Garba brings the unshakeable sense of fear and shame junior doctors experience in making mistakes sharply into focus. Medical errors are almost always multi-factorial; rarely are they solely attributed to the actions of an individual (2). Both human factors and system errors play important roles in medical error; this is well reported in literature (3). As educators, we teach medical students how to avoid making errors, but do little to equip them with the skills to cope when mistakes occur. The evidence for beneficial coping strategies is scarce, and currently there is no cohesive curriculum at the University of Bristol to address how we can best equip our students to cope with medical mistakes. We designed a half-day programme to provide students with a number of strategies encouraging resilience in the face of error. We hoped that, using these, students would learn to view perceived failures as opportunities for growth.

Methodology:
We conducted a literature review of the interventions to enable medical students to cope with errors as junior doctors. Searching Medline, PsycINFO and CINAHL, we used the terms “medical students” and “Failure” OR “resilience”, to yield 59 results. The abstracts were then reviewed for relevance; 33 of which were selected for final analysis. Alongside this, we reviewed several articles that offered suggested coping strategies for junior doctors facing “failures”- these included strategies such as problem based learning, group team-building skills and reflective analysis. Based on our findings, we designed a half-day programme for 36 final year medical students on their Preparing for Professional Practice (PPP) course, at Bath Academy, University of Bristol. We opened the session with a questionnaire exploring student attitudes to mistakes in practice; this was repeated to conclude the session. We also evaluated their existing coping strategies using the “ways of coping” questionnaire by Lazarus and Folkman, both at the start of the session and at 1 week post-teaching, as a measure of the lasting effect of our interventions. The sessions were designed to explore key contributors to errors in medicine- namely human factors and system failings- through a series of case studies, anecdotes from current Foundation trainees and team exercises. After dissecting the underlying factors in “failings” we explored strategies to deal with such failings at an individual, group and wider system level through small group sessions.

Results:
Analysis will take into account students initial scores on the Lazarus and Folkman coping questionnaire which will be collected throughout January and February 2019. We will review whether a broader range of the coping mechanisms are employed following the teaching programme, when provided with a similar stressful case based learning scenario 1 week post-intervention. Full thematic and descriptive statistical analyses will be presented at the conference.

Discussion:
Through this teaching session, we expect to see a change in perception towards medical failures and a greater awareness of healthy coping strategies. We hope to show through the success of this study, the vital importance of introducing a teaching session on medical failures as part of the final year medical curriculum.

References:
Enhancing Communication with Medical Students
R McCarron, P Watson, M Jones
Manchester Medical School

Background:
Manchester Medical School (MMS) uses various platforms to share information and communicate effectively with its students. Some of these platforms are well known: email, programme handbooks and social media. However, unique to MMS are the 1Med and Medlea platforms; internal systems, used to share learning materials, course information and opportunities within the medical school and further afield. There are different subsections of the 1Med system: 1MedLearn, 1MedInfo and 1MedBuzz, each having a different webpage and offering different information. Medlea is an older version of 1Med that is still in operation, it houses students’ timetables and forms. Each year, MMS holds a Year 4 induction, consisting of a series of lectures over the course of a few hours, explaining the requirements of the new Year 4 students. The aims and objectives of this project were to ascertain the ways in which students prefer to communicate with the faculty of MMS and if improvements need to be made to current channels of communication.

Methodology:
An online self report questionnaire was circulated to all students of MMS via student email and the closed ‘Manchester MedSoc’ Facebook page. It consisted of 12 questions, which were a mix of multiple choice and free text based questions. The questionnaire was anonymous, however, students had the option of leaving contact details if they were interested in attending a later focus group. 113 students participated in the questionnaire. After the initial questionnaire, a focus group was conducted, which provided more in depth detail on areas of interest of the study. The data collected was analysed thematically following guidelines created by Braun and Clarke (1).

Results:
The results showed that 85% of students used Medlea as a source of information, whilst only 80% and 74% respectively used 1MedInfo. When questioned on how they would like to receive information in the future, email scored higher at 66%, compared with the online platforms such as 1Med at 40%. Analysis of the data showed that students top choice for receiving and sharing information was email, however the large volume of ‘spam’ emails students were receiving from staff, were deterring them from using it. The focus group confirmed this. With regards to the Year 4 induction, it was found that only 27% of Year 4 participants in the study attended. Of those who did attend, analysis found that students found the day ‘far too long’ and students struggled to remember the information shared on the day.

Discussion:
The results of this report corroborate the findings of previous literature (2); that email is students’ preferred communication platform, however this study further details students’ views of this channel, and discusses potential changes to the way in which email is currently used. Suggestions of decreasing the number of emails sent by the faculty and the ability for customisation of email accounts are things that must be implemented. It was demonstrated that the main issues surrounding the format of the Year 4 induction meeting is the length of time it takes and the content actually presented not meeting the standards required by students. A number of ideas to remedy these issues have been suggested by the author. Future studies similar to this one may provide insight on whether or not any changes implemented were effective.

References:
Feedback Culture in Medical School: An Observational Study of Non-verbal Communication Simulated Communication Skills
K Sibanda, H Wells
Queen Mary, University of London

Background:
Good communication is imperative for doctors and receiving feedback on communication facilitates the transformation from medical student to doctor. Learning culture influences the tutor-student relationship surrounding feedback and medics often find it difficult to give and receive criticism [1]. Certain aspects within the medical culture, such as the power dynamic between tutor and students not wanting to be criticised in front of their peers act as barriers to students receiving constructive feedback [2]. It is argued that over two thirds of communication is non-verbal and so I aimed to observe the student-tutor behaviour surrounding feedback to gain insights into how feedback culture affects these interactions [3]. I was curious as to how tutors balance giving critical feedback with building confidence and how students experience this feedback on an emotional level, and further whether this affects their learning. To what extent does feedback culture in medical school influence behaviour in simulated communication skills practice?

Methodology:
This is a qualitative study where I observed the feedback interactions between medical students and their tutors in a 3rd year simulated communication skills session. During the session, I observed and audio recorded students receiving feedback. 3 tutors and 6 students were observed. Data was collected via narrative non-participant observation using extensive field notes and continuous recording. The audio recording was used to support the field notes for exact representation of responses. Following the observation, I conducted semi-structured interviews with the tutors and students to gain a deeper insight into the perspectives and the insights of the participants. I used the observational field notes to help shape the questions for the interview, and so explored whether my observations of their behaviour reflected the emotional experience of the student and tutor. Using observation and interviews facilitated triangulation of the data to increase the validity and depth of the study. [4]

Results:
I used thematic analysis to identify key concepts and congruent themes found in the transcripts and field notes. Themes from the observational notes and student interviews were focused on body language associated with anxiety, embarrassment, anger, reassurance and pride when receiving feedback in front of peers. The interview of tutors showed many used feedback tools when approaching sessions and used the same tools for each student. Tutors did not mention whether they adapted their techniques when students begin to exhibit non-verbal cues of discomfort, due to them being unsure how to. The balance between giving constructive feedback and building confidence was mentioned by tutors to be challenging.

Discussion:
The non-verbal cues from the tutor seemed to have a bigger impact on the students’ experience of the feedback, more than the content. Modulation in voice and body language of the tutor affected the students view of their own performance and tutors should be aware this may affect student confidence. The relevance of this research is that students often exhibit feelings of anxiety when receiving tutor feedback. Different students react in a variety of ways when receiving feedback and it may be of benefit for tutors to be trained to adapt to students showing a range of emotional responses. Often how the feedback is given and not necessarily the feedback content itself including but not limited to the body language, tone of voice, and environment can have a big influence on the effect of the feedback. Feedback to medical students must find a balance between creating desired change in a student’s behaviour and building confidence. Effective feedback is positively correlated with improvement in student’s performance and so it is important that tutors are able to understand the emotional impact of receiving feedback.

References:
Gamification as an Educational Tool in Undergraduate Medical Education
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Background:
Gamification can be defined as the use of gaming activities to promote engagement and encourage motivation to achieve set goals. It plays an important role in business, marketing and computer science but there is limited literature on the use of gamification specific to medical education. Learning has been shown to be more effective when enjoyable; thus gaming activities designed to entertain whilst educating learners should in theory aid retention of knowledge. The aim of this study was to ascertain the role of gamification as an educational tool in medical education and evaluate the use of gaming strategies implemented into hospital-based teaching for final year undergraduate medical students.

Methodology:
Fifteen final year undergraduate medical students were surveyed at the start of their hospital-based placement to determine their previous experience of gamification and its uses to complement learning. A definition of gamification was provided to the students prior to completion of the survey. Activities involving a variety of games were implemented during the semester and an end-of-placement questionnaire was used to evaluate their use. A five-level Likert scale and open-ended questions were used to obtain answers for the questionnaire. Quantitative data were collated into pie charts and qualitative data were reviewed for further analysis.

Results:
The initial survey results revealed that only 27% of students had experience of gamification during pre-clinical and clinical medical school years to date. Comparatively, 60% had participated in gamification as pupils while at secondary school. Whilst 73% of students were keen for gaming strategies to be incorporated into clinical teaching, only 33% felt it would have educational value in Medicine. Activities that were implemented during the semester included “Kahoot” quizzes to consolidate learning, surgical skills competitions, a laparoscopic skills contest and a medical adaption of the game “Heads Up”. Winning students were rewarded with a small prize in recognition of their achievements. The end of placement questionnaire revealed 100% of students enjoyed participating in the games and 93% felt the activities provided educational value. 100% of students advocated the use of gamification in medical education and 100% felt with hindsight, use of similar activities would have improved their learning experience and knowledge during prior undergraduate learning.

Discussion:
Enjoyable learning fosters effective learning. Medical knowledge and learning correlate with improved patient safety, therefore it stands to reason that medical educators should employ the use of methods that enhance learning. Gamification is an example of a technique that encourages enjoyable and subsequently effective learning and can be incorporated into both clinical and non-clinical teaching. Results from this study showed a significant and optimistic change in the attitude of learners towards gamification. Having participated in gaming strategies during the semester, a notably higher proportion of students expressed appreciation for the educational value of gamification in retrospect. The concepts and well-received activities aforementioned in this study are applicable to any medical school curriculum. Results were overwhelmingly positive and thus we would strongly recommend the implementation of gamification as an educational tool to enhance learning in medical education.
Improving classroom dynamics by utilising Kahoot!
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Background:
In higher education, a shift away from a didactic, teacher-centred classroom towards a more constructivist approach to learning, has led to the increasing use of technology as a means of enhancing student participation (1,2). Studies suggest that passive teaching fails to engage students the effect of which is a poor learning experience (3), whereas active learning promotes higher-order thinking and improves motivation (4). Incorporation of game-based teaching into the classroom is a method of fostering this active pedagogy (5). ‘Kahoot!’ is a game-based student response system which allows the user(s) to anonymously answer questions on their phone, awarding points based on accuracy and speed. We aimed to evaluate whether using Kahoot! improves classroom dynamics.

Methodology:
‘Kahoot!’-based quizzes were incorporated into a teaching programme consisting of 10 tutorials designed to prepare final year medical students for both the Prescribing Safety Assessment and clinical practice. Each session began with a non-medical quiz and ended with one based on the content of the tutorial. A questionnaire was distributed to the students at the end of the teaching programme to evaluate the usefulness of incorporating the ‘Kahoot!’-based quizzes.

Results:
A questionnaire was developed using Likert-scales to evaluate the students’ perception of using ‘Kahoot!’ The response rate for the questionnaire was 86.5% (32 out of 37 students replied). Of the respondents 30 (93.8%) felt that the content of the medical quizzes were aligned to their learning objectives. 17 students (53%) felt that they wanted to learn more about the topic because they enjoyed the quiz and only 4 (12.5%) disagreed with this sentiment. 28 students (87.5%) found completing the quiz satisfying and 31 students (96.9%) disagreed that the quiz was boring and not engaging. Furthermore, 15 students (46.9%) felt that their concentration had improved because they were aware that there would be a Kahoot! quiz at the end of the tutorial, with only 8 (25%) disagreeing with this statement. When asked whether doing well on the medical quiz was the most satisfying element of the tutorial, there was an equal split; 15 (46.9%) agreed and 15 (46.9%) disagreed. The key themes that emerged from the free-text responses were that the students thought Kahoot! was fun and created an engaging start to the tutorials. The students also felt that Kahoot! made the sessions more interactive and helped to consolidate learning. Some students did, however, have concerns about the level of competition introduced.

Discussion:
The majority of the students enjoyed the incorporation of Kahoot! based quizzes into their tutorials and felt that it improved classroom dynamics. This is also anecdotally reported by the tutors and supported by the literature (6). Whilst we appreciate the difficulty in drawing conclusions from the opinions of only 32 students, there is equally no reason to suspect that our cohort varies significantly from other undergraduate medical students. With the caveat of ensuring that the competitive element remains light-hearted, we recommend using Kahoot! to improve student satisfaction, motivation and attitude.

References:
Improving medical students’ learning experience in paediatric clinical placements

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Background:
There is an increasing thirst for the understanding of how medical students learn most effectively from their clinical placements. Much has been written about learning styles (1), how expertise develops in medicine (2) and the influences on student mind-sets and behaviours (3). Little has been documented by students about which learning methodologies they find most beneficial and why. This study puts students’ perspectives about their learning during a paediatric clinical placement at its core and offers an insight into how students’ learning experiences can be optimised and delivered in an effective and clinically relevant manner.

Methodology:
In 2009, medical student placements were redesigned in response to Action Research based recommendations to provide consistent structured placements. In particular, bedside teaching became focused on history elicitation, symptoms and signs analysis with physical examination followed by a brief discussion on management, rather than the presentation of clinical cases in a classroom. A weekly extended match questions (EMQ) and single best answer (SBA) question style session was initiated which were categorised by speciality. A further weekly classroom session was also introduced which required students to recognise symptoms and signs through images. Feedback was collected from 149 students attending the placements from 2009-2014 using a Likert scale questionnaire and free texts. Freehand comments were also encouraged; these then underwent conventional content analysis to code and identify themes in the data.

Results:
149 students completed their evaluation forms, with no unusable forms, and 297 freehand comments were received. Teaching methods consistently rated highly for educational value were those that are practical; focused on clinical signs and symptoms; which offered opportunities for discussion and student involvement with timely feedback. In this respect 51% (n= 1073) of all changes were rated as very useful and only 3% (n=62) were rated as not useful. The weekly MCQ style of teaching was unanimously well received as students valued learning how to dissect the questions and how to apply their knowledge in that format. Similarly, the paediatric picture sessions were very well received with 90% (n= 97) of those participating reporting them as very useful. In terms of the learning environments: students preferred inpatient settings to community settings.

Discussion:
Often students experience difficulty not in the traditional content learning of medicine but in learning to recognise and interpret the data before them. Our analysis suggests that focused symptoms and signs orientated bedside teaching reinforced with EMQ and SBA sessions start to bridge this gap. In our analysis, students were clear that there are endless sources of data for the rote learning of patterns. However, what they perceived made this placement very effective was that they were exposed to a wide variety of presentations for common conditions and encouraged to develop their own patterns of those symptoms and signs that occurred consistently or most commonly. Different paediatric clinical areas were less of a determinant for student learning when compared to teaching style. Students found this way of teaching to be of more relevance than traditional grand rounds and ward rounds as it allowed for more discussions and practical learning opportunities. This study suggests that creating placements that offer strong theoretical knowledge grounded in practical and memorable patient examples not only leads to high student satisfaction but also seems to establish the foundations needed for achieving good clinical practice.

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Improving the effectiveness of simulation learning
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Background:
Simulation teaching has become an increasingly popular modality of providing undergraduate and postgraduate medical training. Potential benefits of simulation training include being able mimic real life clinical scenarios in a controlled environment. This enables trainees to practice management of critically ill patients, communication scenarios as well as clinical skills in a realistic setting, prior to encountering this in clinical practice (1). Despite the increasingly popularity of simulation, the training itself is often not performed in a standardised fashion and there is a paucity of research on how to maximise the effectiveness of this teaching (2). During this study we assessed two different formats of simulation learning to try and determine the effectiveness of both approaches.

Methodology:
The study was approved by the university ethics committee and all participants provided written informed consent. Medical students who had completed pre-clinical training and who had therefore had minimal previous exposure to simulation training were asked to complete a range of clinical scenarios concerning the assessment and management of acutely unwell patients. Students were placed into two groups. The first group performed simulation exercises individually with other students in the group watching. The second group performed the simulations dynamically with all students being asked to participate in the scenario sequentially when the active student had made a mistake. The management of an acutely unwell patient was then assessed in both groups by student performance in a final clinical scenario which focussed on the treatment of acute coronary syndrome. Performance of each student was graded by a blinded assessor, using a standardised marking sheet, which focussed on history, assessment, investigations and management. A total score was then assigned to students, out of a maximum of 42 points.

Results:
There were 28 students who took part in the study with 14 in each group. Performance as assessed in the acute coronary syndrome scenario was significantly better in the second group who had received dynamic simulation training, mean score 21.5 points versus 16.2 (p<0.0001). In particular patient assessment scores were much higher (mean score 12.4 points versus 6), suggesting that this group had better learnt the important systematic ABC process of acutely unwell patient assessment. Feedback from students during the simulation learning suggested that the dynamic learning process was more stressful than performing simulations scenarios individually. However a concurrent study which measured student heart rates during the simulation exercises did not identify any differences between stress responses in the two types of simulation learning.

Discussion:
Our study has shown that the effectiveness of simulation learning can be significantly improved by using a dynamic style of teaching clinical scenarios. In traditional simulation learning students perform mock clinical scenarios individually whilst the remainder of the group watches and doesn’t actively participate. In the dynamic style of teaching all members of the learning group participate in each scenario and are asked to complete different stages of the scenario sequentially after an individual has made a mistake. This not only increases the participation of group members but also encourages ‘active watching’ even when individuals are not directly performing aspects of the scenario. Although this style of learning is perceived as being more stressful it doesn’t appear to induce anymore of a stress response in students and therefore dynamic simulation training should be promoted as a means to enhance the effectiveness of this type of learning.

References:
Innovating Problem Based Learning with Virtual Reality Technology
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Background:
Problem based learning is a significant teaching method within the undergraduate curriculum. These methods rely on problem cases or scenarios to allow the learners to define their learning objectives. One of the challenges of problem based learning is ensuring the cases are realistic and engaging. Traditional methods of delivering the case is a text-based scenario. However, this relies on the undergraduate students having an understanding of the environment where the consultation is taking place. To improve undergraduate student understanding and engagement, we have created a new method to enhance problem-based learning. Virtual Reality Fully Immersive Interactive Technology Teaching (VR FITT) is an innovative teaching method that we have developed. VR FITT employs the use of high-definition 360 cameras to record a simulated patient interaction. These encounters become interactive by adding a range of interactive options including hot spots and interactive questions. These are then uploaded to an online app which the students can access. The students then use their smartphone as a virtual reality headset. The aim of this study was to compare student knowledge and engagement between traditional PBL vs VR FITT enhanced problem-based learning.

Methodology:
Medical students were divided into two groups of eight both undertaking the same problem-based learning case. The traditional PBL group underwent the PBL case using a text-based scenario. The second group underwent PBL teaching using a VR FITT case. Both groups underwent the same contact time with a facilitator and had access to their case at all times across the study period. We undertook a baseline knowledge assessment and a post-case knowledge assessment to compare between the two groups. Along with this, each group undertook an engagement questionnaire.

Results:
Preliminary results have shown no significant difference between the two groups. Assessment of the current amount of data shows that those undergoing VR FITT enhanced problem-based learning have progressed their knowledge further than those undergoing traditional teaching. Statistical analysis is currently ongoing to compare the two groups post intervention knowledge and engagement questionnaire.

Discussion:
Initial results show VR FITT enhanced problem-based learning to be superior to traditional PBL. A possible reason for this is due to greater engagement with the scenario to enhance their learning from the scenario and in the learning objectives they create.

Board: R3
Introducing Near Peer OSCE Finals Revision Events for the University of Central Lancashire

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Background:
The University of Central Lancashire (UCLan) took on its first cohort of medical students in 2015. The UCLan assessment structure involves their students sitting their final OSCEs in their fourth year. These are due to take place in spring 2019. As UCLan is a new medical school and this is their first cohort of students, there are no established external revision events to support the students in their revision, as is common in the majority of medical schools. In 2018 this was recognised by a group of Foundation Year (FY) doctors at East Lancashire Hospitals NHS Trust (ELHT), and a pilot OSCE revision day for third year students was successfully organised. In order to aid the students’ preparation for their final OSCE assessments, we are planning to develop the pilot OSCE revision day into a series of revision events. Our primary purpose is to offer a series of optional revision events which give students clear guidance on the level of knowledge and skill expected to pass their final OSCE stations across a range of medical specialities.

Methodology:
We plan to offer a series of revision events held across four non-consecutive days. Each day has been themed towards different medical specialities. The themes we have identified are general medicine, general surgery with orthopaedics, obstetrics and gynaecology with paediatrics, and psychiatry with neurology. In order to identify suitable topics for the events, we are liaising with the UCLan undergraduate team to determine key aspects of the curriculum. Students will be contacted and asked to identify topics that they need support on. The revision events will be seminar-based, and will give the students the opportunity to have some practical experience. We will approach FY doctors to facilitate the teaching at the events, as we believe this will maximise the students’ learning as research has shown that near peer teaching is valued by medical students and has a positive influence on their learning(1).

Results:
As this abstract has been written prior to our events taking place, we have included the results from our 2018 pilot day to highlight how successful it was, and the potential that the 2019 revision events have. Our pilot day involved the delivery of six different sessions. Quantitative and qualitative feedback was collected using a questionnaire. A 5 point Likert scale was used and feedback was collected on whether the sessions addressed the students’ learning need, if they increased students’ confidence, if there was an appropriate level of teaching, session interactivity, and whether they would recommend the session. The average scores ranged between 4.4 and 4.6. Qualitative feedback collected was positive with common themes being students liking the overall approach and that the teaching environment facilitated their learning. Some feedback highlighted room for improvement, including wanting the inclusion of different clinical specialities and having more time for simulated practice. UCLan commended the event highlighting the organisation, as well as this being a new opportunity for UCLan students to have access to newly qualified doctors who have recently sat their exams.

Discussion:
It is clear that we have identified that there is a need for guidance of OSCE revision for UCLan students, and this is especially important when they are sitting their finals. We are planning to address this by planning revision seminars that will support the students in achieving their learning objectives through near peer teaching. We expect our seminars to be successful and to have a positive contribution to the students’ OSCE performance. Furthermore there is clear benefit for the FY doctors involved with the event as they will gain teaching experience and leadership skills which are relevant to the foundation curriculum(2). We plan for this to become an annual event for students, and expect it will be integrated into the junior doctor led ELHT Undergraduate teaching committee to ensure continuation in future years.

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Is it possible to improve the experience of low fidelity simulation in a classroom environment?
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Background:
One of the key areas the General medical council (GMC) highlights as an area that medical school graduates need to be competent in is diagnosing and managing common medical conditions(1). Using simulation as a teaching method has been shown to hold greater ability to aid trainees with retention of knowledge compared with lectures (2). Development of technology has led to a development in the capabilities of simulation mannequins which benefits patients due to the simulations ability to improve standards of healthcare(3). However, this leads to an increase in cost. Is there a feasible alternative to high fidelity simulation that may be cheaper to run? Low fidelity simulation has been shown to be more effective than traditional methods and generates confidence in the participants own abilities(4). However, is there a way to improve this further? By using technology to make low-fidelity simulation more realistic in a classroom environment, it is possible to make low-fidelity simulation a viable, more accessible learning tool for medical students compared to other forms of simulation and that such changes improve student experience and learning.

Methodology:
Weekly low-fidelity simulation sessions were run at St. Georges University with the help of facilitators from East Surrey Hospital simulation team. The environment was a classroom made more realistic by playing hospital sounds and using medical props. All years were invited to participate but all our respondents were in their clinical years. Once students arrived they were given a “pre-course questionnaire” to fill out prior to each session. This questionnaire aimed to assess initial perceived competency and previous experience with simulation. Scenarios were devised that were compatible with low fidelity scenarios i.e. using an actor and supervised by a senior clinician. The scenarios were enhanced using a monitor, which demonstrated the patient’s simulated heart tracing and other observations. This was controlled by a separate technician on a hand held tablet, and responded depending on the students management plan. Each scenario lasted approximately 20 minutes and the clinician and observers gave individual feedback directly afterwards. At the close of the session a “feedback questionnaire” was handed out. This questionnaire asked for feedback about the session, how useful it was and how it compared to other simulation experiences they had had. One week, a group of participants went down to East Surrey Hospital high fidelity simulation suite for a session. The same questionnaires were handed out and results recorded as a comparison group.

Results:
A summary of the key findings: 1) The majority (71%) of students responded agree to the statement “today’s session was realistic as if I was on a ward”. 2) The most positive response was in favour of the sound effects (which included the iSimulate alert sounds) 3) All students responded agree or strongly agree when asked if they felt more confident after the session 4) Most students felt it was comparable to other simulation sessions they had participated in (89%) 5) 100% of students thought simulation should feature more in the curriculum

Discussion:
From the results we see that adding simple, easily accessible props and sound effects to low fidelity simulation improves the experience of this type of simulation, so it is on a par with other forms of simulation. The low fidelity approach to simulation means the sessions are more accessible to students as they can be run in a classroom and don’t require a highly technical simulation suite with multiple staff. They require less technology and less faculty therefore this much sought after form of teaching can be run more frequently or even by the students themselves.

References:
Is there a difference in the perception of outpatient clinic teaching, between medical students and teachers? A mixed method study
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Background:
Undergraduate education can take various forms. Outpatient clinics are a resource that could be greatly beneficial, when utilised correctly, for combining scientific knowledge with clinical experience for medical students. There are several factors affecting learning in this environment. Some are organisational and others are personal, amongst which is the students’ and teachers’ attitude towards this method of learning (McGee & Irby, 1997). Outpatient clinic teaching has an important role in undergraduate education (Almoallim et al, 2015; Wood, 2003). There is also evidence that this practical aspect of participation is a more effective way of learning (Schmidt, 1993). The General Medical Council (GMC) suggested that greater use is made of outpatient clinics for students’ teaching in order to combine scientific knowledge with practical experience as recommended in tomorrow’s doctor document for undergraduate medical education (GMC, 1993 & 2009). Despite this clear role there are restrictions which could impede the learning process including time and space restrictions. It is also dependent on the teacher’s personality and attitudes towards teaching in outpatient settings (McGee & Irby, 1997). In this project the aim is to explore the perception of each group involved. This will help our understanding of the nature of limitations and identify steps we can take in order to maximise the learning process in the outpatient environment

Methodology:
A mixed method project including on-line questionnaires, focus group and interviews with total of ninety two participants. This was conducted in a local university hospital. Fifty teachers and forty two students were asked about teaching styles undertaken and limitations during clinics. They were also asked about how to improve the learning process during outpatient clinics.

Results:
Teachers and students agree that seeing patients under supervision is the ideal teaching style during clinics. Both groups agree that time and space, are the obvious limitations to outpatient teaching. Advanced planning, however, and teachers’ attitude toward teaching have also been rated highly from students’ perspective. Graphs and tables will be shown in this section to summarise finding.

Discussion:
Common themes emerged between students and teachers regarding outpatient teaching. Reducing patient numbers seems the ideal solution but difficult in the current climate due to the increasing demands on services. In this study, it was perceived that improving communication before and after clinics between students and teachers could be easily achieved and positively influence learning in this setting. Most teachers would consider undertaking training in outpatient teaching (23 versus 14). Recommendations: Trusts are encouraged to invest in teaching clinics idea where feasible Teachers are encouraged to engage with medical students during clinic time in order to improve the learning experience Students are encouraged to give prior notice for teachers before attending clinics and to read about subject matter beforehand

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Is there room for improvement in quality improvement education? A pilot near peer undergraduate QI teaching project

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Background:
With increasing recognition of the importance of equipping frontline staff with the skills required to effect change where it matters most, initiatives to teach quality improvement (QI) are being awarded emerging importance in medical education.1, 2 However undergraduate coverage is neither ubiquitous nor standardized,3 leaving potential for an unsupported leap to postgraduate level. Mandatory requirements for junior doctor led QI projects (QIPs) offer a launch pad to implement change but perhaps without sufficient knowledge of techniques underpinning successful QI. Barriers to curriculum integration include packed curriculum requirements and a lack of faculty teaching capacity.2,3 A potential solution to the latter is to branch from employing senior expert lecturers to utilizing junior doctors to deliver near peer teaching, designed to both upskill their undergraduate audience and share learning to build their own QI capacity. Aim: To deliver a near peer led QI workshop to undergraduate fifth year medical students at Cambridge medical school.

Methodology:
A stand-alone 3 hour QI workshop was developed by three foundation year 2 doctors based on resources designed by Imperial College Healthcare Trust QI team. Content was framed around the model for improvement and the use of plan-do-study-act (PDSA) cycles.4 Students were invited to bring their own improvement ideas to the session. The workshop prioritized early career relevance and interactivity, with activities designed to teach QI techniques whilst building their ideas into viable QIP plans. Students were divided into groups of 20 with teaching delivered by junior doctors below ST3 level. Due to curriculum organization the student cohort was split as follows; 49 students taught in January 2019 with workshops planned for 80 students in March 2019. Students completed pre and post workshop questionnaires to evaluate perceived usefulness and content. The questionnaire invited suggestions for improvement with a view to refining the session content and delivery prior to the second set of workshops planned for March.

Results:
Preliminary results were collected after the January workshops with completion of 37 pre and 24 post session questionnaires. Results are as a percentage of completed questionnaires. Prior to the workshop 57% (21) students reported either no (4) or minimal (17) confidence in their understanding of what QI is and 81% (30) reported no (11) or minimal (19) confidence in applying QI techniques to their own projects. Following the session 100% students were either fairly (17) or very (7) confident in their understanding of QI, with 96% feeling fairly (22) or very (1) confident in applying QI techniques. Students valued the near peer teaching method with 88% (21) stating a preference for teaching by junior doctors over senior QI experts. Cited reasons included proximity to undergraduate level - “have been in our position recently”; appreciation of QI relevance to students - “know what level we are at”; informality - “more down to earth”; student engagement “they make the sessions more engaging” and recent experience of QIPs-“more recent experience and offer more practical advice.” Several students mentioned appreciating learning about QI through the development of their own projects. Following the session 83% (20) reported that such a workshop would be a valuable curriculum addition. Areas for improvement related to workshop length, pre session information content and inclusion of more “real life” QI examples. These changes will be implemented prior to the March workshops.

Discussion:
Active engagement in QI will span the duration of many doctors’ careers; this well received pilot highlights the importance of providing undergraduates with an early foundation in QI techniques. The project provides a potential framework for delivery utilizing junior doctors to develop leadership and QI in tandem across the spheres of undergraduate and postgraduate education.

References:
"It’s not fair". Arts and humanities in medical education and their presence (or absence) in medical school promotional literature.

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Background:
There is increasing presence of arts and humanities in medical education with some suggesting that there should be a national curriculum in the UK (1). In a 2018 survey of UK medical schools 93% of respondents reported that there was arts and/or humanities within their undergraduate curriculum (2). A survey of students from five USA medical schools found that exposure to humanities was correlated with increased empathy, reduced intolerance of ambiguity and reduced emotional exhaustion (3). These outcomes align well with the GMC Outcomes for Graduates. However, there is also some resistance to the inclusion of arts and humanities within medical education (4, 5). Some students responded that the inclusion of arts and humanities within their medical curriculum was “unfair” as it differed so much from their expectations of medical school (6). These reports and unpublished survey data that we have collected (2) suggest that at times there is a clash between the aims of those providing arts and humanities learning activities to medical students and student perceptions and expectations. Can this clash be resolved by considering and addressing students’ expectations? We have examined all websites and prospectuses for UK medical schools to see whether there is any mention of arts and humanities based teaching within literature that is aimed at prospective new students.

Methodology:
UK medical school websites were accessed between January-April 2018. All publicly accessible pages relating to applications to medicine and the medical course were read and the content analysed. This included any videos or downloadable documents presented within these pages. Sections of websites aimed at current students were excluded. Any mention of arts or humanities learning activities were noted. Prospectuses (academic year 2018-19) were read looking for any content relating to arts or humanities. Large prospectuses were analysed by applying a list of search terms relating to arts and humanities followed by close reading of relevant areas of the document. Particular attention was paid to sections presenting a summary or overview of the course and highlighted course features. Where references to arts or humanities related teaching were found, the specific form of activity and the context in which it was mentioned were noted.

Results:
Approximately two-thirds (24/33) of medical schools make some mention of a form of arts and/or humanities somewhere on their website and/or prospectus. In most cases (19/24) this was limited to a very brief mention such as appearing within a list of course content or potential options for student selected components (SSCs) or intercalated degrees with no further information. In 13/24 cases this mention was only found by following links to other pages such as more detailed course descriptions or lists of optional learning activities. The most commonly mentioned discipline was “sociology” or “social sciences”. Only three medical schools highlight arts and humanities within their curriculum as an important feature on their websites and prospectuses. Five medical schools presented more detailed information about the place of arts and humanities in medical education and the intended benefits for medical students. However, in four cases this was only visible if following links to a page about a specific intercalated degree. Only one medical school presented this information in relation to the core medical course.

Discussion:
Based on the content of medical school websites and prospectuses it would be reasonable to conclude that most potential students would not expect to encounter arts and humanities at medical school. Does this matter? It does if the dissonance between expectation and reality prevents students from engaging with teaching and interrupts learning opportunities. We plan to carry out focus groups with students to find out more.

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Junior doctor-led teaching at the bedside for undergraduate medical students: what is the BEST solution for both parties?

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Newham University Hospital

Background:
Learning at the bedside is an invaluable tool for undergraduate medical students and augments their clinical contact time. Whilst traditionally consultant-led, Foundation doctors and Core trainees are showing increasing interest in becoming involved with clinical education. Medical students feel comfortable receiving bedside teaching from near-peers as they feel they are more approachable and have a better knowledge of the undergraduate curriculum. The organisation of regular bedside teaching, however, can be difficult and unsustainable.

Methodology:
We recruited small groups of junior doctors across four hospitals to act as tutors for 3rd and 5th year undergraduate medical students for the Bedside Education for Students (BEST) programme. Each group of doctors was then assigned to a small group of students and asked to fill in a teaching plan outlining the aims and objectives, structure and timetabling of the teaching sessions. We created an online feedback link for the tutors to disseminate to their students. We also sent pre- and post-programme surveys to the tutors to collect their feedback on the BEST Programme. Finally, we sent a post-programme survey to the undergraduate students.

Results:
Of the 134 doctors across four hospitals who showed interest, 54 tutors delivered at least one session and were recruited. A total of 162 sessions were delivered (mean = 3 sessions per tutor). The sessions were categorised as follows: 65% bedside teaching, 27% tutorials, 5% lectures and 3% practical skills. 56 doctors responded to the pre-programme survey (65% FY1 doctors, 25% FY2 doctors and 10% post-Foundation training). 24% reported having no previous experience of delivering any bedside teaching for medical students. 47% reported having no formal training in teaching. 79% reported they felt confident in acting as tutors for bedside teaching for medical students. The majority of the doctors were worried about time management (73%) and a lack of suitable patients or resources (68%). The average student rating out of 10 for sessions was: 9.7 for usefulness, 9.8 for relevance, 9.8 for tutor knowledge and 9.3 for tutor confidence. 21 tutors responded to the post course survey (70% FY1, 25% FY2 and 5% post-Foundation training). 42% delivered weekly teaching, 29% fortnightly and 29% monthly. 67% reported time management and 48% reported a lack of suitable patients or resources as being a challenge during the BEST programme. Only 14% reported having a lack of ideas for teaching sessions. 81% reported that the BEST programme had increased their interest in medical education and 100% reported said they felt confident in acting as tutors for bedside teaching for medical students after this programme. Five 3rd year students completed the post-programme survey. 80% reported that it was easy for them to attend teaching sessions. 80% reported that they “strongly agree” or “agree” that their tutor was knowledgeable about the topics taught. 60% reported that “strongly agree” or “agree” that the BEST Programme has improved their confidence with clinical examination skills. 80% reported that “strongly agree” or “agree” that the BEST Programme has improved their clinical knowledge.

Discussion:
Junior doctors are interested in being near-peer clinical tutors for undergraduate medical students, however time management is a major barrier. Medical students have availability in their timetable to attend bedside teaching sessions and find this a beneficial experience for their clinical knowledge and general confidence. Although the majority of junior doctors do not have any formal training in teaching, they feel equipped to teach medical students, but this is not necessarily compatible with the demands of working life. The positive outcomes from the BEST programme suggest that Foundation doctors should be encouraged to teach medical students on clinical placements. Building in protected time into their rotas can facilitate this and they should have greater access to formal teaching resources.

References:
Just coughs and colds? Student perceptions of intellectual stimulation in General Practice
H Alberti, P Goeres, M Hofmeister, M Kelly, E Tang
University of Newcastle

Background:
The perception that General Practitioner’s (GPs) deal with ‘minor’ ailments, while more complex issues are dealt with by hospital specialties, may be a disincentive to students choosing a career in General Practice. General Practice is facing a recruitment crisis and it has been postulated that one possible factor is students not perceiving primary care to be an intellectually stimulating career. A previous systematic review on interventions to encourage careers in academic medicine found that interventions in undergraduate medical education were little studied. Recent research indicates that students do not perceive General Practice to offer the variety of academic challenge they aspire to. The aim of this study was to explore the views of medical student on General Practice as intellectually stimulating, including whether students believe these perceptions can be changed or challenged and how, in order to develop recommendations to aid General Practice recruitment. Findings will be compared and contrasted internationally (UK and Canada).

Methodology:
The design was a qualitative focus group study, from a post-positivistic epistemological stance. Seven focus groups were held (44 clinical medical students) at two universities, Newcastle Medical School (UK) and Cumming School of Medicine (Calgary). The interview schedule was developed from the literature and piloted with the first focus group. The discussions were recorded, transcribed and coded using template analysis to identify key themes.

Results:
Three key themes were identified: what is intellectual stimulation, what is academic general practice and influences on students’ perceptions. Students were mixed in their views of intellectual stimulation in general practice. For some, the variety of problems and career flexibility offered intellectual stimulation and students felt that GP’s were “really clever” as they required a broad knowledge base and “need to know everything”. Interestingly, they remarked that the time pressure of ten minute appointments was an intellectual challenge. However, for others, this breadth was overwhelming and off-putting. Disparagement of GP’s during medical school was noted to be a negative influence, as general practice was associated with having a minimal knowledge base and the perception that “GP’s do the low levels of work”. There were several external influences on student perceptions, including the general public perception that they “do not realise GP’s are doctors” as well as negativity in the media about GP’s. Prior hospital experiences were also noted including comments from secondary care colleagues such as “why has the GP done that” as well as the feeling that wanting to be a GP is seen as “less ambitious” and some students “do not want to admit they would want to be a GP’. Students were perplexed by the notion of academic general practice; when probed, they associated it with teaching and research. They floundered to identify what GP’s would research and how they would do it. There was a lack of exposure to academic GP and some students felt they had “this lack of knowledge about it as no one teaches us about it”.

Discussion:
Our findings suggest that strategies are needed to promote general practice as intellectually stimulating and a possible academic career for students. Potential strategies include showcasing research in general practice, fostering interactions between academic GP’s and medical students, and offering students opportunities to get involved in primary care research. Further focus groups in the UK and Canada are planned to enable further conclusions to be drawn.

References:
Medical Ethics and Film: an effective method of developing empathy in medical students?
S Rahman, S Khan, A Raby
London North West University Healthcare Trust

Background:
Communicating and acting with empathy are key elements of undergraduate and postgraduate medical curricula in the UK[1]. A new “Medical Ethics and Film” specialty choice module has been introduced at Imperial College London, designed to explore medical ethics and the portrayal of the virtues of a doctor in film. The module involves four weekly sessions designed to examine themes such as end of life care, mental health, genetics and disability, with a selection of relevant films forming the basis of discussion. The objectives of the module are to utilise the narrative to stimulate critical analysis and moral imagination, alongside development of empathy. The aim of this study is to evaluate the effect of the use of film on the development of empathy in eight fourth year medical students on a taught ethics specialty selection module at Imperial College London.

Methodology:
Two cohorts of third year medical students have undertaken the module, providing their insights into the programme through written feedback obtained following each individual session. In addition, formal assessment was completed to evaluate whether objectives were met.

Results:
Preliminary results indicate an improvement in empathy amongst medical students.

Discussion:
Narratives within media can simultaneously provide multiple perspectives on a given issue, as well as those of demographics of society which are otherwise poorly represented. Examination and analysis of these can facilitate the cultivation of moral imagination within a traditional classroom setting, in a similar fashion to consideration of the emotional and social experiences of patients. Determining whether the empathy of medical students develops following participation in this course could promote this model of teaching and advocate the expansion of the role of media in teaching of medical ethics.

References:
Medical students' perceptions on how they should be taught prescribing
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Academic Unit of Medical Education, University of Sheffield.

Background:
Prescribing is a complex clinical skill that medical students need to evidence competency in by graduation. New graduates are often anxious about prescribing, particularly high risk medications such as opiate analgesics, hypnotics, warfarin (1) and insulin (2). There is broad heterogeneity in how medical students learn to prescribe with little standardisation between medical schools’ approaches. Educational strategies that medical schools could use to support undergraduates’ prescribing learning and skills development are described (3,4). However the views of students and their perceptions on how they could be supported within the journey towards developing prescribing competencies is rarely explored.

Methodology:
Undergraduate medical students (n=24) were invited to participate in focus groups (n=4). Recruitment was undertaken posting invitations on the medical school learning management system, and verbal notifications during lectures. Two focus groups comprised students within the 2nd year of the 5-year MBChB course with limited clinical experience, and two focus groups contained students in their final 18 months of undergraduate training, with more significant clinical experience. Students were asked to describe teaching and learning strategies currently utilised to support prescribing learning, and their perceptions of efficacy. Finally they were encouraged to describe how future prescribing learning might be enhanced. Focus group recordings were promptly transcribed verbatim, and thematic analysis was performed on this qualitative data.

Results:
Medical students articulated a preference for learning prescribing by working collaboratively in small groups, with a facilitator able to provide immediate face to face feedback. They wanted to be taught by a combination of junior doctors and pharmacists, and to have opportunities to practice prescribing regularly throughout the course. Even students early within training with limited placement experience understood the role of the pharmacist and the role they played in preventing medication errors reaching the patient. Students identified a need for dedicated time during rotations for prescribing, not just during clinical placements but also during lecture blocks, so that prescribing was fully integrated into their learning journey. They considered they should have written at least 50-100 prescriptions before graduation, although they wanted these to be spread out throughout the 5 year course. They considered that their practice prescribing should mimic as closely as possible the prescribing they would do as a doctor and be contextually either case-based or patient-based with supervision. Medical students nearer graduation expressed concerns regarding their prescribing competencies aligned with those of new graduates; areas of specific anxiety included prescribing of intravenous fluids, analgesics including opiates, antibiotics, anticoagulants and insulin.

Discussion:
Medical students, even early within their training, demonstrate insight into similar areas of lack of confidence, and specific drugs that new graduates are concerned about prescribing (1,2). Undergraduates perceived a need for more practice prescribing than undertaken currently, and had clear views on how they wanted to learn these skills. Prescribing is increasingly electronic rather than handwritten and as such online self-directed activities may contribute to their learning, and support development at a level of independence required by graduation. However students value dedicated regular time on clinical placement with a prescriber, working through authentic patient cases in small groups with immediate personalised feedback. This should be considered when identifying educational strategies to enhance prescribing learning. A case for enhanced prescribing learning throughout the course is clear, and specifically embedded within clinical placements during the later years of the training, potentially aligned with self-identified areas for enhancement.

References:
Medicine for non-scientists: Assessment of a Near-Peer Learning Intervention for First Year Medical Students from Non-Biological Science Backgrounds

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Background:
Diversity of medical students is needed to deliver the best healthcare for the next generation. Tomorrow’s doctors need good communication skills, expertise in digital interfacing, understanding of health economics and other important qualities that non-biological science background (NBSB) students can contribute to the medical educational enterprise, enriching and enhancing everyone’s education through their diversity - a factor shown to have education benefits in multiple sectors1. Nurturing this diversity must start at Medical School by accepting students with non-biological science backgrounds (NBSB). Though NBSB students eventually perform as well as their peers2,3 during their first, and only, pre-clinical year they undergo significant psychosocial stress4. Near-peer teaching, teaching by senior students on the same course, has been shown to be an effective educational intervention 5,6. However, no research currently exists investigating the effectiveness of this intervention for specific educational groups such as NBSB students. We hypothesised that near-peer teaching by and for NBSB students provides an effective learning intervention both in improving understanding of formal course content and nurturing a supportive environment to reduce stress. We also aimed to understand whether providing teaching support benefitted the peer teachers by improving their own understanding of the course.

Methodology:
A NBSB teaching programme was developed at Warwick Medical School consisting of two main elements: (i) pre-module sessions introducing in advance, cell and tissue biomedical concepts that were yet to be covered in formal lectures, and (ii) weekly tutoring, covering the more scientific aspects of topics presented in formal lectures from the previous week. Qualitative and quantitative feedback was collected using a monitoring and evaluation tool developed by the organising group of students. This included the distribution of anonymous online questionnaires to both first year attendees and second year ‘teachers’, requesting feedback on the content, organisation and structure of teaching sessions. The data collected was analysed and reported on at the end of each five-week module.

Results:
During the first year of this intervention the number of weekly attendees reached 24 students, and in the second year of teaching weekly numbers have reached 28 students. 100% of students ‘strongly agreed’ or ‘agreed’ that pre-module sessions helped them better understand the formal content better. 94% of students ‘strongly agreed’ or ‘agreed’ that weekly teaching helped them better understand the formal module content and felt more confident in understanding lectures as a result of this support. Qualitative data showed that NBSB teaching made core content more accessible for students with a non-scientific background and the atmosphere had a positive effect on the mental health of participants. Comments included: “These weekly teaching sessions are an absolutely integral to my learning, the standard is always exceptional and the atmosphere and compassion you show us has made a big difference to my mental health.” “The weekly seminars are invaluable - I haven’t missed one yet. As a student from an arts background I have found the course overwhelming and honestly don’t know if I’d still be here without the teaching and support of the non-science teachers and the friends I’ve made in the seminars” In addition to benefits for attendees, our data showed that 80% of second year peer ‘teachers’ either ‘agreed’ or ‘strongly agreed’ that delivering teaching sessions was useful for their own studies.

Discussion:
We conclude that near-peer teaching by and for NBSB students is an effective educational intervention, increasing understanding and providing invaluable psychosocial benefit, and has the potential to increase access for NSBS students, diversifying tomorrow’s doctors.

References:
MEDICS (medical education in clinical settings) Award: An Innovative approach to near-peer teaching
P Jalota, H Welch, T Wallbridge, J Pepper
Walsall Healthcare Trust

Background:
Teaching is an important skill as a doctor but there is limited opportunity to deliver teaching as an undergraduate medical student. We set up a formal near-peer teaching scheme for final year students with 3rd year medical students to help develop 5th year students teaching and aid 3rd year learning.

Methodology:
Whilst on placement at a DGH there were 21 fifth year students, 18 of whom voluntarily signed up to the award. It was named the MEDICS award (Medical education in clinical settings). We delivered a 45 minute session to them introducing them how to run and prepare for a bedside teaching session along with information about feedback models and educational theory. The majority of students were allocated to a 3rd year on a 1:1 basis and were asked to deliver a minimum of 8 hour of teaching over the 8 weeks of their block, predominately practicing history and examination skills. Each 5th year student was also observed delivering a bedside session by a Clinical Teaching Fellow who debriefed with them about their strengths and areas for improvement in regards to preparation, student interactivity, feedback and content. The 5th year later wrote a reflective essay piece on their teaching experiences allowing them to further think about their teaching experiences. The final year students completed a questionnaire at the start of the scheme with 4 questions and a Likert scale, which they then repeated at the end. The 3rd year students also completed a feedback form.

Results:
The quantitative and qualitative results were overwhelmingly positive. There was 100% response rate from 5th years in post evaluation questionnaire and 94.4% pre-intervention. 88% had never had formal teaching about medical education prior to the scheme When asked if “I feel comfortable preparing a teaching session” 11/18 responded strongly agree and 7/18 answered “agree” compared to only 1/17 answering strongly agree initially. When asked if “I feel comfortable delivering a teaching session” there was a jump from 52.9% feeling positive to 100% after the scheme. All 18 final year students answered on their post evaluation questionnaire that because of this scheme they would be more likely to teach in the future. Comments included that it “was one of the best things about this placement” and that it was “very enriching and enjoyable, looking forward to engaging in teaching opportunities in the future”. Students found it “invaluable” and “very rewarding to both 5th and 3rd year students”. All students commented on the informal and friendly nature helped to test their knowledge in an unpressured space.

Discussion:
Introduction to medical education is important and enjoyable for medical students but unfortunately has limited exposure in undergraduate curriculums. Teaching is a large part of continuing professional development as doctors and more experience at university will have a positive impact on their students and as educators in the future. Near peer teaching allows an informal teaching environment in which to develop skills which they will utilise in their future careers and should be included more.
MedSim: Integrating clinical reasoning in undergraduate medicine through a lo-fidelity simulation programme
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NHS Lanarkshire

Background:
Simulation in undergraduate medical education has become widespread and has been incorporated into many university curricula, particularly as acute care skills are difficult to teach in a classroom setting and students find it challenging to bridge the gap between theory and practice. A lo-fidelity simulation programme called “MedSim” has been developed for use in the Year 3 and Year 4 medical blocks. This provides repeated simulation based training in managing acute medical emergencies at the level expected upon graduation, and seeks to complement existing teaching strategies already in place. This simulation programme has been designed to bridge the gap between theory and application of that knowledge in managing acutely unwell medical patients. We wished to determine whether repeated participation in an undergraduate simulation programme over a short period of time develops confidence and competence in managing acute medical emergencies as an undergraduate.

Methodology:
The MedSim programme consists of 4x3 hour sessions which cover 3 scenarios per session. The sessions are built around the patient, who is a ResusAnnie augmented by props. Each case has a storyboard, chest X-Ray, blood results and ECG. The students take it in turn to act as the junior doctor and each student on average leads 3 scenarios over the programme. The students take a history combined with a focused clinical examination, acting on abnormal findings and using results to come to a diagnosis and management plan. This programme puts traditional tutorial based teaching into context and develops clinical reasoning, confidence and competence in managing medical emergencies as an undergraduate. Prior to the programme, students completed a pre-course questionnaire which establishes their previous experience of managing acutely unwell patients during clinical attachments, and how they self-rate their confidence and competence with regards to clinical and non-technical skills in managing acute medical emergencies using a Likert scale. An evaluation form completed at the end of the programme asks how beneficial they found the course, and how well the course developed confidence and competence in technical and non-technical skills whilst managing acute medical emergencies. During the simulation sessions, each student is rated objectively using the Ottawa CRM Rating Scale.

Results:
The pre-questionnaire data suggested low student confidence and low perceived competence at managing medical emergencies, which corresponded to their lack of clinical experience. During the programme, student competence at managing medical emergencies improved with repeated exposure to lo-fidelity simulation. Post-questionnaire data demonstrated a corresponding increase in student self-rated confidence and competence at managing medical emergencies. The programme itself was extremely popular and led to the programme being run Lanarkshire-wide as an established part of the undergraduate medical block. Student feedback indicated that they valued the experience of having to make clinical decisions in context and found the programme to be an excellent addition to the curriculum.

Discussion:
Using low-fidelity simulation to teach students how to manage medical emergencies is an enjoyable (for students and tutors alike) and valuable experience, that complements other more traditional methods of educational delivery. The sessions are replicable, and do not require extensive kit or training to deliver. Teaching students to think like doctor by putting a case into context with results of investigations and challenging students to make clinical decisions in real time is an invaluable experience for these undergraduates. The value of these sessions extends beyond their placements as they start their clinical careers and one that will serve them well for graduation and beyond.
Mind control: increasing medical students' metacognitive ability
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North Bristol Academy, North Bristol NHS Trust

Background:
GMC Outcomes for Graduates 20181 mandates doctors’ commitment to lifelong learning to keep up with the ever-changing, developing world of medicine. Most learning as a graduate is self-directed, yet how much time during medical school is devoted to an individual’s ability to cultivate expert learners as well as accomplished clinicians? Metacognition is self-awareness and analysis of one’s knowledge and strategies to learn2. Through awareness of their own cognition and these strategies learners are able to enhance their self-directive abilities in learning. Metacognitive practice can improve learning autonomy3, enabling students to learn more2 and improve overall academic performance4-6. By recognising its’ essential nature as a trainable skill we need it to be embedded into curriculums7, particularly with emphasis now on autonomous learning and continuous professional development. Our aim is to determine whether explicitly incorporating the teaching of metacognitive skills, as opposed to current practice in which any teaching is not explicitly expressed and therefore part of a hidden curriculum8, will improve student understanding and confidence in applying these techniques to learning. If this is possible it can enable students to be more effective learners, an increasingly necessary skill for doctors throughout training.

Methodology:
Final year medical students will be invited to attend a half day workshop integrated into their Preparing for Professional Practice (PPP) module. The workshop will be divided into two sections - knowledge and activities. Students will initially be introduced to the concept of metacognition and consider prior learner knowledge on which further understanding can build. Thereafter metacognitive techniques and skills will then be reviewed and practiced. These activities will be categories into three stages: planning, practice and evaluation9, which we will explore through small group activities and reflective exercises.

Results:
Qualitative data will be collected through questionnaires which students will complete pre- and post-workshop and again two weeks later. This will allow us to review any immediate and delayed impacts of the workshop, based on the learner’s perception of effectiveness, allowing us to analyse the impact explicit metacognitive teaching has on student confidence, understanding and ability to integrate metacognitive skills into their learning.

Discussion:
This work will help add to a growing body of understanding of the role of metacognitive training in the undergraduate medical curriculum. If benefit is identified, we would consider integrating an introductory workshop on metacognitive skills into the PPP module subsequently. On a larger scale, this work could contribute to further studies investigating whether explicit learning on metacognition in undergraduate students throughout their training prepares them for continued professional development upon graduating.

References:
Mindfulness-based programmes in improving the mental health of medical students: a systematic review and meta-analysis
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University Hospital Bristol

Background:
The prevalence of psychological distress in medical students is higher than that of the general population (1). This appears to start on entry to medical school: the prevalence of depressive symptoms is less than 2% prior to starting training, increasing up to 30% by the end of the first year (1). Burnout, self-harm and suicide are not uncommon (2-4) and suicide rates for female medical students in the US are 3-4 times higher than age-matched women in the general population (1). A meta-analysis of stress management programmes has shown that improvement in the mental health of medical students can be achieved (5). Mindfulness-based courses have gained momentum in recent years for their success in reducing stress and enhancing wellbeing in many populations (5-8). As of 2013, 14 medical schools around the world had integrated mindfulness teaching into their curriculum (9). The evidence supporting its use in this population, however, is derived from studies with small cohorts, or findings have been generalised from other populations (10,11). The aim of this study was therefore to review the evidence to evaluate the effectiveness of mindfulness-based interventions in reducing stress and promoting positive mental health in medical students specifically.

Methodology:
The study was conducted and reported according to the PRISMA standard of quality for reporting meta-analyses (12). Medline, Embase, CINAHL, PsychINFO and ERIC were searched by two independent assessors. Exclusion criteria included non-randomised controlled trials and papers not available in the English language. Data was extracted using a proforma. The Cochrane Risk of Bias Tool (13) was used to assess the quality and risk of bias of the studies. Reported outcomes relating to the impact of the intervention on stress, anxiety and depression were captured. These were collated for short and long-term outcomes: short-term was defined as within a week of the intervention’s completion, long-term as any time-point after this. Meta-analysis of the combined results was performed using Revman 5.3 (14). Statistical significance was defined by p<0.05 throughout.

Results:
The search ran from inception until 08/05/2018 and yielded 7383 studies, of which six were eventually included in the review (n=580) (15-20). Four studies had mindfulness interventions in which the participants met face-to-face with a teacher, the other two used multimedia to deliver the intervention at home. All outcomes were measured by self-report questionnaires. All trials were of a similar methodological quality according to the Risk of Bias tool (13). Mindfulness-based interventions were associated with a statistically significant reduction in stress in both the short (MD -3.57, 95% CI, -4.87,-2.28, p<0.001), and long-term (MD -1.70, 95% CI, -3.34, -0.07, p=0.04). There was no statistically significant difference between intervention groups in depression in the short (MD -1.38, 95% CI -3.47 to 0.72, p=0.2) or long-term (MD 0.02, 95% CI -0.82 to 0.86, p=0.96), nor in anxiety in the short (SMD -0.30, 95% CI -5.70 to 5.10, p=0.91) or long-term (SMD 0.12, 95% CI -0.98 to 0.74, p=0.78).

Discussion:
With the current challenges facing the NHS here in the UK (21) it is of utmost importance to foster the mental wellbeing of those just beginning their career. This paper’s results demonstrate that mindfulness can reduce stress in medical students, consistent with other meta-analyses (8, 22), though there were no effects on depression or anxiety outcome measures. Importantly, adherence to mindfulness practice in all studies was low: in one, only four of the 30 students reported regular home practice as advised in the intervention (16). This questions the practicality of mindfulness-based approaches in medical students: they demand considerable time investment. To unpick whether this is a truly practical option for hectic medical student lives, future research should include more trials of mindfulness in this population and explore why adherence is so low.

References:


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Moving the discussion to the cloud. Students' evaluation of Google Slides as an alternative to Blackboard’s Discussion Board for collaborative learning in PBL.

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Background:
An important element of Problem Based Learning (PBL) is collaboration among students to enhance their learning experience (1). Collaborative learning requires students to be interdependent on one another for knowledge construction, thus the effectiveness of collaboration is in turn influenced by the interactions of the students as a group (2). However there is very little scope for students to interact when they are studying in between the PBL tutorials. To support interactions of a PBL group, students are presented with virtual learning environments such as Blackboard’s Discussion Board. However the design of the Discussion Board which mostly is suited for threaded discussions cannot facilitate real-time interactions to meet the demands of collaborative learning. Instead Discussion Boards are widely used as a resource site for curriculum contents rather than as a platform for collaborative learning (3). As such alternative teaching tools are required to allow students to communicate effectively and easily in between PBL tutorials to support their collaborative learning.

Methodology:
This study sought to determine students’ perceptions of using Google Slides to facilitate collaborative learning in between PBL tutorials. Students of a Year 2 PBL group volunteered to take part in this study which was conducted over one semester of PBL tutorials. The study was conducted using a pre and post-intervention approach. Before implementing the use of Google Slides, students were asked to evaluate their experience of collaborative learning and information sharing using the Discussion Board. Students were then shown how to set up Google Slides as a resource sharing tool for PBL which was to be used for the latter half of the semester. Students undertook a post intervention evaluation to establish the impact of using Google Slides for information sharing. Students’ evaluation of their PBL experience was captured using Likert-based questionnaires and free-text data was gathered using Google Forms.

Results:
Nine out of the ten students of the PBL group engaged with the study and completed the questionnaires. In assessing the ease to which information can be shared among themselves in between PBL tutorials, students perceived Google Slides to be a better tool in comparison to the Discussion Board. Students also reported that the use of Google slides allowed them to be organized and time efficient in working collectively to understand the concepts when answering their ILOS. This coincided with students perceiving Google slides to be more effective for collaborative learning than the Discussion board.

Discussion:
This study showed that Google Slides can be a better alternative to the Discussion Board to allow students to communicate and be efficient with their learning in between PBL tutorials based on the following points. 1) Akin to Powerpoint, Google Slides can be used to convey information through text and figures which can help students to understand complex concepts. 2) Google Slides is hosted within Google Apps which runs on cloud computing. This can enable students to use the slides at the same time and from anywhere. Since students can interact in real-time outside the classroom this can be considered an advantage to work collaboratively in enhancing their learning (4). In summary, this study has shown that cloud based technology such as Google Slides represent learning tools which students engage effectively to aid their collaborative learning.

References:
No plane, no gain: Introducing a new Aviation Medicine SSC
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University of Bristol

Background:
Student selected components (SSCs) form an exciting and integral part of the University of Bristol’s medical curriculum. They provide an opportunity for students to gain experience in an area of their choosing, that may not be covered in their curriculum and can also give unique opportunities to witness careers that students have not been exposed to. (1) In 2018, a new Aviation Medicine SSC was introduced to Bristol University to give students the rare opportunity to explore this specialised branch of medicine. Aviation medicine combines aspects of occupational, preventative and clinical medicine with the physiology and wellbeing of humans in flight. (2) It is a small but growing speciality and has recently been approved by the GMC as a speciality training program. (3) This SCC was run in collaboration with aeromedical examiners (AMEs) who are doctors that are certified to perform medical examinations for aircrew and air traffic controllers. This study aims to explore the development and success of this SCC.

Methodology:
The Aviation Medicine SSC was available for third and fourth year medical students at Bristol University and ran for a three week period in July. Activities on this course included three clinic days at Gloster Aviation Medicals, one clinic day at an aeromedical centre in London, two days of tutorials and one day where the students had a flying experience in a light aircraft to experience disorientation and G-forces. All participants were invited to complete a paper questionnaire on their experiences.

Results:
A small group of students attended the Aviation Medicine SSC in July 2018. Over two days, students received 7 tutorials which included the principles of aircraft flight, the aircraft environment, the AME career pathway, pilot personality, mental health in pilots and how to perform an aeromedical exam. Most of the tutorials were rated unanimously as excellent and a few were rated as good or excellent. Students reported that the tutorials enabled them to consider situations they would not encounter in the hospital environment, learn about the career of an AME and to think about what medical conditions would affect pilots and patients in flight. The flight experience was rated as excellent. Students reported that it was enjoyable and gave them “first-hand experience of disorientation and aerobatics” which reinforced to them “the importance of the physical and mental health of a pilot”. During clinics, students observed and participated in medicals under the supervision of AMEs and spoke to pilots about their feelings and experiences of medicals. Students reported that it was useful to practice clinical skills, “see a new side of medicine” and “how working as an AME is different to hospital medicine and GP”.

Discussion:
As feedback from the students on the Aviation Medicine SSC was so positive, this SSC will be continued for following years. Since this speciality is a niche area of medicine, only a limited number places for students will be available. In future years we would like to expand this SSC and involve aviation doctors from the RAF so students have the opportunity to experience both civilian and military aviation medicine.

References:
Not another ice-breaker: Developing an innovative induction programme for medical students on clinical placements

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Background:
The General Medical Council states that induction is required for every clinical placement medical students undertake (1). Research has been undertaken looking at specialty-specific inductions (e.g. critical care) (2), but literature review produced no results on how to structure a general induction programme for medical students. Study in this area of medical education is important due to the potential impact on students’ behaviour, conduct, wellbeing and sense of belonging early on in their medical careers. The aim of this project is to develop an innovative induction programme focusing on student needs when starting placements in new hospitals, and evaluate its impact on student perception of induction.

Methodology:
Ethical approval was obtained from the University of Bristol. A learner-centred induction programme was developed; this included breakout small group sessions on human factors, team building and learning in the clinical environment. A pilot programme was delivered in September 2018 and sessions modified according to feedback. The full programme will be used for induction in January 2019, with third year medical students from the University of Bristol starting placements at Gloucestershire Academy. Pre and post induction questionnaires with Likert scales and white space answers will be distributed to determine comprehension, expectations and opinions on the value of induction. These will provide both quantitative and qualitative data, the latter through thematic analysis of white space answers.

Results:
Preliminary feedback from a pilot programme in September 2018 was positive; students described the breakout sessions as interactive, varied and engaging. Data from the pre and post questionnaires will be available to present at ASME ASM 2019. The results will establish students’ views on induction, and allow us to delve further into their knowledge and attitudes behind this. There is scope to follow up with students at a later date to see if the induction programme has been beneficial outside of the classroom.

Discussion:
Increased understanding of the importance of induction may have beneficial effect in future. Results will inform further development of general induction programmes for medical students; in depth conclusions will be available upon full analysis of data. Transforming induction based on the data collected has the potential to immediately change students’ practice, but also their practice as doctors in future. Getting this right early on could therefore ultimately improve patient care.

References:
Not Your Average Sim On-Call
M Bacon, A Rochester
Surrey and Sussex Healthcare NHS Trust

Background:
There has been a significant rise in the use of Simulation (Sim) in medical education (1-3) and this form of teaching has started to percolate into undergraduate education as well. At East Surrey Hospital, we provide a variety of Sim opportunities, including the Simulated On-Call at SASH (SOS) Course. Though not the first of its kind, it does provide a unique combination of approaches to Simulated On-Calls including erasable drug charts, use of real bleeps, opportunity to chase jobs on real wards, an on-call handover, assigned facilitators for personal feedback, an acute ABCDE-style scenario and two entirely different sessions, so that students and facilitators can observe any improvements. Our hope is that this emphasises, not only the popularity, but also the great potential of undergraduate Sim teaching. This is especially in the context of on-call training, which currently is almost a non-entity despite being fundamental to work as an FY1. We hope that medical schools in the UK recognise the importance of these forms of teaching, which has already occurred elsewhere (4-7). We are in the process of making a transferable course pack for use at other trusts. However, support from medical schools is necessary to make this sort of teaching as ubiquitous as perhaps it should be.

Methodology:
Since September 2018, we have run weekly SOS sessions. So far, we have had 46 students participate, with 40% managing to do it twice. We have collected pre- and post-session questionnaires from students regarding their opinions and evaluation of the course using Google Forms. On top of this, each student has been evaluated by their assigned facilitator with performance on various domains recorded. This evaluation asked the following:

Per scenario:
- How long did it take to answer the bleep?
- How many times were they bleeped?
- Did they note full patient details?
- Did they note any extra clinical details regarding the patient?
- Did they ask for tasks to be done prior to attending the patient?

Per Student:
- How well did they keep a list of jobs?
- How clear was the handover?
- How well did they note patient details?
- Did they note patient locations?
- How well did they prioritise jobs?
- How many jobs did they manage?
- How well did they use senior support? Each facilitator had guidance on rating students, to try to improve inter-rater reliability. Note was made of how many sessions the students participated in so a comparison can be made on performance.

Results:
Full results are pending due collection still currently underway. So far, there has been overwhelmingly positive feedback from the students so far:
- 100% would do the course again
- 100% would recommend it to a fellow student
- 100% feel it should be part of a curriculum
- 97% felt it improved their confidence regarding FY1 On-Calls Analysis on performance has yet to be completed.

So far, it seems that doing an SOS session more than once does improve the student’s ability to cope with it.
Discussion:
The transition from student to qualified FY1 has the potential for great stress (8, 9) and any training that supports students with this is likely to be welcomed. Often in teaching it is easy to evidence that your teaching was popular amongst students. Despite this, we find our positive feedback incredibly encouraging. However, it appears that very few in the literature have attempted to show any objective evidence that Sim On-Call courses actually improve the abilities of medical students, thereby justifying their cost in terms of equipment and manpower. We hope that this small scale, subjective analysis is the start of a journey of inquiry into evaluating the significance of Sim courses on medical student experience, performance and, as a result, their preparedness for work as junior doctors. This data, along with future endeavours by other educators, should hopefully contribute to a body of evidence towards the use of Sim in medical student education and in particular for use in On-Call training.

References:
Ophthalmology for Medical Students at King’s College London
L Rahman, S Ali, H Pandian
King’s College London

Background:
King’s College London’s (KCL) Ophthalmology syllabus theoretically provides adequate exposure through eye clinics and surgeries, small group-teaching with a named registrar and e-learning modules. Despite this, the 2015 End-of-Placement Survey demonstrates the lowest satisfaction rate of all clinical specialties taught at King’s. The aims of this project were to elicit the reasons behind the low satisfaction rate for Ophthalmology in 2015, by assessing current teaching practices and exploring students’ perspectives.

Methodology:
A questionnaire was sent to 140 KCL students on the Year 3 Ophthalmology placement during the 2017-2018 academic year. Students were based at Guy’s and St Thomas’, King’s College Hospital, East Kent University Hospitals and Lewisham and Greenwich NHS Foundation Trusts. The responses were assessed using SPSS Software Version 25.0.

Results:
The survey had a 37.5% response rate. A key issue elucidated was that 68% of students were unable to meet their named registrar regularly. 74% of students did not receive the minimum clinical exposure time recommended by the Royal College of Ophthalmologists. Only 50% of students found the e-learning resources beneficial and 44% did not find shadowing clinics helpful. Finally, only 14% of students would consider a career in Ophthalmology.

Discussion:
The results demonstrate a clear deficiency in teaching opportunities, useful learning tools and clinical exposure in the curriculum that may contribute to the lack of interest in pursuing Ophthalmology as a career. In order to ameliorate this, the curriculum must be enhanced with increased teaching opportunities e.g. lecture series’ and initiatives to drive interest in Ophthalmology e.g. national student conferences.

Board: T4
Positive impact of training in conjunction with Cancer Research UK (CRUK)
S Dayala, N Williams
University of Manchester

Background:
Improving cancer outcomes in primary care is one of several objectives of Cancer Research UK (CRUK) (1) that directly aligns with strategies and initiatives from the UK government (2) and National Institute for health and clinical excellence (NICE) guidance (3). Despite initiatives that can be traced back to the NHS Cancer Plan in 2000 (2), The Health Foundation report in November 2018 published data to illustrate that 5-year cancer survival rates in England lagged behind its global comparable nations (4). It is therefore essential that the NHS drives forward significant changes that support primary care in improving the early diagnosis of cancer (4 and 5), especially in providing greater support for streamlined processes and quality improvement. The aim of our work was to increase the likelihood of GP tutors offering a quality improvement project for medical undergraduates in cancer care through use of a face to face training session, using a bespoke toolkit created for use of Manchester medical students.

Methodology:
Vignettes of student scenarios related to project work in cancer care were discussed by tutors at 3 optional workshops (5-8 tutors per workshop) who attended an annual training event, run in conjunction with CRUK. Tutors were facilitated in small groups to use the bespoke toolkit, available in paper and electronic format, to help discuss the given student scenarios and develop a resolution. Quantitative and qualitative evaluation of the workshop was completed through questionnaires in paper and online format using non-duplicate questions.

Results:
20 GP tutors attended. More tutors responded to the paper questionnaire compared to online (80% response rate versus 75% respectively). All respondents said the toolkit assisted them very well (11) or quite well (5) to plan their next steps in the theoretical workshop scenarios and reported either definitely (12) or probably (4) using the toolkit in future. Qualitative comments were highly favourable.

Discussion:
The bespoke toolkit aims to encourage and support quality improvement work in relation to cancer care and represents the first University and CRUK collaboration in the UK in order to support medical student involvement in cancer care at a General Practice level, the setting which is most appropriate and relevant for the early diagnosis of cancer. Training in small group workshops, in conjunction with CRUK and using the bespoke toolkit, has had a positive impact on tutor likelihood of offering quality improvement projects for medical students in cancer care. It is hoped that this innovative approach will help to medical students to deliver sustainable transformations in cancer care at a local level in primary care, thereby developing their leadership skills and professionalism. Further evaluation is being conducted to assess the actual uptake of projects in cancer care and resulting impact on individual practices.

References:
Preparation of medical students for practice through the novel use of virtual ward rounds
T Wallbridge, H Welch, P Jalota, T Wallbridge, J Pepper
Walsall Manor Hospital Teaching Academy

Background:
How best to prepare medical students for practice as junior doctors is a contentious issue. One of the main tasks performed by junior doctors is partaking in ward rounds with documentation and requesting investigations at the heart of this. Walsall academy has developed a novel concept of a virtual ward round. The aim is to improve the skills required of a junior doctor.

Methodology:
A high fidelity simulation ward was created using mannequins, documentation and an educator role playing a senior clinician. The students were divided into groups of two or three. They were placed in the role of junior doctors to document, create a jobs list, prioritise and order investigations. Questionnaires were distributed before and after the session to ascertain students’ comfort in tasks such as documenting, prioritising, making referrals, requesting imaging and prescribing.

Results:
Nineteen final year students took part. The session was well received with 84% strongly agreeing (16% agreeing) that the session was useful. All of the students said they would recommend the session to other final year students. Students’ comfort improved across the board in all tasks performed. Students’ “understanding of the responsibilities of a junior doctors on the ward round” improved with 100% agreeing or strongly agreeing after the session, compared to only 37% agreeing beforehand.

Discussion:
This method of preparation to practice has shown its worth with students’ confidence and comfort in tasks vastly improving. Students were also able to identify gaps in their knowledge, and therefore look for ways to improve. This allowed the teaching academy to tailor future sessions to the areas where students wanted further training.
Raising the profile of Academic General Practice to medical students.
H Alberti, E Lamb
Newcastle University

Background:
General Practice is struggling to recruit and retain high quality trainees.[1] Reasons for this are multifactorial but one postulated influence is students’ misperception that General Practice is not a prestigious or academically challenging career choice.[2] National studies support this concept: The recent ‘Destination GP’ survey jointed led by the Royal College of General Practitioners (RCGP) and the Medical Schools Council (MSC) found that only 3% of medical students associated General Practice with being intellectually challenging.[3] The Wass report ‘By choice - not by chance’ was commissioned by Health Education England to support medical students towards careers in General Practice.[4] The report found that students perceive that the specialty fails to offer the variety of academic challenge that they aspire to and made various suggestions to support institutions with raising the profile of academic general practice. We believe that correcting this misperception and raising the profile of academic General Practice amongst medical students is vital in order to attract high quality clinicians and potential future educationalists and researchers into General Practice, and we offer some consensus-based and evidence-based suggestions.

Methodology:
In response to the Wass report, leads of GP teaching at 14 UK Medical Schools responded with their plans to implement the proposed areas for change. We collated these responses, analysed those which would help raise the profile of academic General Practice, and then convened an interest group at our institution including academic GPs, academic GP trainees and medical students undertaking a student selected component in academic GP.

Results:
Collated responses described a range of strategies to raise the profile of academic General Practice to medical students across the institutions. A common theme was that academic training posts in General Practice were seen as valuable and that these opportunities appear to be increasing (e.g. as Academic Clinical Fellows or Innovative Training Posts). The input of GPs in delivering teaching throughout all years of medical school is recognized as important, many institutions are increasing their number of GP teaching fellows, and both the fellows and more senior GP educators are being encouraged to teach intellectually challenging subjects and to increase the time they spend teaching students. Opportunities to undertake electives, summer projects and student-selected components linked to academic primary care are being made more widely available, and funding to enable students to attend conferences and present their primary care research with prizes for scholarly activities in this field are proposed as an incentive to encourage more academic activity. Most medical schools suggested that the academic contribution of GPs needs to be recognized within institutions and some are having success, evidenced by GP academics holding senior positions within the medical school. The interest group proposed a number of interventions for implementation by medical schools, GP teachers, GP training programmes and the RCGP.

Discussion:
Medical students form opinions on careers based on their experiences during medical school. If the majority of contact they have with GPs occurs through the teaching of non-academic topics such as communications skills by educators who do not hold senior positions within the university, or in practice where little time is available for research due to clinical workload, it is unsurprising that they do not perceive General Practice to be an academic career. It is essential that General Practice attracts high quality individuals with the potential to become academics in primary care where research and education are of huge importance. The suggestions we offer from a variety of interested parties we hope will go some way to supporting changing the perceptions held by our medical students and increase awareness of academic career pathways in General Practice.

References:
Signs Circuits - Evaluation of a high-yield course designed to increase exposure and confidence examining clinical signs for final year medical students at 3 hospital trusts
King's College London

Background:
During Medical School, most students will not have heard or elicited, let alone had direct guidance on examining most clinical signs, yet as doctors they will receive little further training but soon be expected to diagnose and evaluate patients independently. First began for final year medical students at William Harvey Hospital, Ashford in 2017 and now also run at King’s College Hospital and Whipps Cross University Hospital, we have designed a course to give students high yield exposure and direct guidance examining patients with clinical signs over the course of their rotations at our hospitals. Further, it provided a framework by which junior doctors could develop their teaching skills. The course has since repeated many times with small changes. Students were surveyed prior to and concluding the course on their experience and comfort with clinical signs along with direct feedback on the course.

Methodology:
Final-year students have rotations at our hospitals for 6-7 weeks at a time. They are split into groups and provided weekly teaching sessions. Each session, the students see 3-5 patients on the wards in a circuit, in small groups of 2-4. Patients are found and consented by leads in advance to provide a broad range of common and rare signs and presentations. By each patient there would be a doctor, who has been introduced to the patient in advance and prepared a small teaching session. In focused 20-minute stations, the students are given the opportunity to inspect the patient from the end of the bed and come to some conclusions, before being guided through the key signs and being asked to interpret them. The students are then be offered the opportunity to re-examine and clarify any signs they were unable to appreciate or interpret the first time. They then rotate to the next patient, filling out feedback for the previous tutor on their phones or on paper. Most stations focused on common and rare cardiac, respiratory, abdominal and neurological signs.

Results:
Approximately 200-300 students have been taught at various sites over the last 18 months. Feedback has been overwhelmingly positive with students reporting increased confidence in interpretation and much greater exposure to clinical signs. Almost all rated the course as excellent (average 4.94/5) and that they felt more prepared for their final OSCE examinations (average 4.87/5). Many commented that it was amongst the best teaching they had received in medical school. One student writing "this is exactly what I hoped medical school would be like". Pre-teaching surveys revealed poor prior exposure to even the most common signs and that prior to this, few had received specific guidance on eliciting clinical signs before and unsurprisingly felt little confidence eliciting them. Approximately 30 patients are seen by each group, covering a core medical curriculum and a large number of signs that are often seen in person for the first time. The patient contact, and focus on clinical signs and observation were particularly appreciated, along with the interaction and guidance from junior doctors. All the teachers felt the course helped them develop their teaching skills, which they adapted over the duration of the course.

Discussion:
This programme emphasises the relative ease with which a large programme of bedside teaching can be incorporated into mainstream medical school teaching, along with the enthusiasm of students for such opportunities. While time consuming to arrange, with a team of accomplished junior doctors and administrative support the course has been able to run successfully across multiple sites and learning environments. In the future we will strive to improve the efficiency with which sessions can be arranged amongst the local junior doctor cohort, whilst developing further interactive learning materials and complementary teaching sessions.
Student and Educator Perspectives on Clinical Empathy and the Teaching of Compassion
A Craig, J Atkinson, H Alberti, W Laughey, M Brown, G Finn
Newcastle University Medical Education Department.

Background:
Background & Purpose The General Medical Council clearly outlines that doctors in training must have the required communication and interpersonal skills to demonstrate empathy and compassion.1 This study seeks to understand medical student and educators’ views on empathy, compassion and ethical erosion. The aim is to explore students and educators perspectives on what compassion is, and whether and how it can be taught or learnt. We hope to increase our understanding of the phenomena of compassion within the context of undergraduate medical education

Methodology:
Methodology We undertook a multi-centre, qualitative study, in line with an interpretivist paradigm, using semi-structured interviews. We interviewed 6 educators involved in empathy/teaching and 5 clinical medical students at one medical school. The interview schedule was developed iteratively in collaboration with Hull York Medical School who are planning similar interviews to develop a multi-centre comparative study. Interviews were transcribed verbatim and transcripts thematically analysis.

Results:
The following themes have emerged from the analysis: Role modeling While none of our participants interviewed so far felt compassion and empathy can be taught in the classroom, all interviewees mentioned role models as a powerful teaching tool. Both educators and students suggested that clinical tutors be reminded of the importance of their behavior when with medical students. An environment that allows compassion and empathy to flourish The majority of those interviewed discussed the effect of time pressure and stress on one’s ability to be a good role model. Students discussed the prevailing culture within their cohort. One student felt that the lack of diversity and the privileged upbringing of some medical students hindered their cohort’s ability to truly empathise with the patients they meet. Ethical Erosion Defined as ‘an empirically observed phenomenon whereby medical students and doctors become less morally sensitive and ethically aware due to increasing cynicism.’ Students recognised this phenomenon of ethical erosion in their peer group possibly as a coping strategy. All study participants, student and educators alike, felt we should act against this attrition of empathy. Professionalism Both educators and students expressed concern that displaying overt emotional responses can make them appear unprofessional. OSCE empathy and the empathic statement Participants felt that the empathic statement can, on its own, feel empty. Students felt that use of these statements promotes a culture of ‘faking it.’ Educators felt they were able to identify those students who were unable to communicate empathy effectively.

Discussion:
Our findings identify some interesting points for further exploration and discussion. The finding that all participants perceive role modelling to be of central importance can be used to inform teacher training days, with, for example, a session which raises the awareness of role modelling amongst clinical teachers. The importance of a display of compassion and empathy in being a good doctor was raised frequently. Although difficult to define, understanding what these phenomena are is vital. Facilitating students to appreciate compassion, and at the very minimum to demonstrate it with authenticity, will be a challenge but clearly warrants ongoing and interesting discussion.

References:
Student Designed Simulation in Sports Medicine
I Ferarrio, M Natarajan
University of Bristol

Background:
Simulation training is a relatively new technique for teaching in medical schools and was originally proposed in order to bridge the gap between lectures and the clinical environment, increasing student’s confidence before interacting with patients. Multiple studies have been conducted to test the effectiveness of this teaching technique. This testing has demonstrated that simulation has led to improvement in medical knowledge, comfort in procedures and improvement in performance. (1) Previously, simulations delivered to students have been designed by current doctors. In order to create a simulation that was specifically target focussed to medical students, a new concept of a student-designed simulation in sports medicine was considered. This allowed for the incorporation of aspects which, from the students own experience, were found to be useful into the resulting simulations.

Methodology:
1. Experience - this was gained through multiple placements in and outside of hospital. 2. Simulation Design - advantages and disadvantages of all scenarios were carefully considered to create a list of aspects of which it was imperative to include. Using a template of previous scenarios, these features were then implemented into the resulting design. The designs were targeted to the clinical learning objectives for the specific injuries. 3. Running a Simulation - Scenarios were run for Year 3 medical students at the University of Bristol where feedback was collected verbally and through feedback forms.

Results:
Two scenarios, involving a femur fracture and a tibia-fibula fracture, were created (including key aspects discussed below) and delivered to current medical students. The following is some of the feedback that was obtained from the students: "I loved being taught by another medical student" "I found the scenario even more beneficial with a real person, it is very different to the sim man." "I felt the scenario had really thought through with regards to what would benefit us most"

Discussion:
Use of an actor - There are obvious disadvantages to using a real person during simulation as you can’t take bloods, use air equipment and don’t have realistic heart or breath sounds. However, this is counteracted by the high fidelity simulation that is created with the use of an actor and the ability to gain patient perspective feedback. (2) Despite this, the level of realism of the scenario also needs to be matched to the level of education of the students, as high-fidelity situations can distract from basic learning. (3) Therefore, the choice of whether to use a mannequin or patient actor ultimately depends on the specific scenario and level of education of the student. Moulage - the use of moulage can also help to create a high fidelity simulation. Video Feedback - providing facilities that allow other students to remotely watch the scenario in another room is of significant value. Firstly, this puts less pressure on the students taking part in the scenario and also allows for peer feedback to be given. Debrief - important aspects of the debrief include the opportunity for the students to say what they believe went well or not to allow them to self-evaluate. Consideration of the level of the students - The level of the students taking part in the scenario needs to be carefully considered. Although all scenario’s should be a learning experience, overwhelming the student can have a negative effect. These scenarios were specifically designed for students that had undertaken a Sports Medicine course. Conclusion Student designed simulations are a successful way of developing learning resources for other medical students, creating a student focused scenario suited to those taking part. Student designed simulations not only benefit those taking part but also those designing the scenario, offering the opportunity to teach other students and expand their own knowledge. Student designed simulation also has the potential to be expanded to all areas of medicine.

References:
Student stress response in simulation learning
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Southmead Hospital, Bristol

Background:
Simulation teaching has become an increasingly popular modality of providing undergraduate and postgraduate medical training. The potential benefits of simulation training include being able mimic real life clinical scenarios in a controlled environment. This enables learners to practice management of critically ill patients, communication scenarios, as well as clinical skills in a realistic setting, prior to encountering this in clinical practice (1). Despite the increasingly popularity of simulation, the training itself is often not performed in a standardised fashion and there is a paucity of research on how to maximise the effectiveness of this teaching. Simulation itself may also be a stressful experience, particularly for undergraduate students, which may also limit the potential benefits of this type of training.

Methodology:
We performed a study in order to assess the stress responses elicited in medical students during simulation training. The study received university ethics approval and all participants provided written informed consent, prior to taking part. Heart rate monitors were used as a surrogate measure of the stress response and were monitored continuously on students during the simulation scenarios. Students were asked to perform a range of different clinical scenarios which focussed on the management of acutely unwell patients. Students worked in pairs during the scenarios and were asked to complete the scenarios in two different strategies. In the first exercise the two students worked together through the scenario sharing management decision making. In the second exercise students had to work through the scenario individually and were swapped with their partner after individual steps in the scenario.

Results:
In total 22 medical students completed the study. All students were at the end of their pre-clinical training, and therefore had had minimal exposure to simulation training, prior to this experience. In the first exercise, where students worked through scenarios together as a pair, the mean average heart rate was 88 (range 116 - 70). The mean maximum heart rate was 109 (range 139 - 90) and the mean minimum rate was 76 (105 - 55). In the second exercise where students had to complete components of the scenario in isolation the mean heart rate was 87 (range 116 - 62). The mean maximum heart rate was 110 (152-74) and the mean minimum heart rate was 73 (95-50). When the heart was compared between pairs of students performing the same scenario there was significant mean difference in heart rate of 14.2 (range 46 to 1.3) (p<0.001).

Discussion:
Our study has demonstrated that simulation training elicits a significant stress response in medical students performing clinical scenarios and that this stress is very different amongst individual students. This was particularly evident when heart rates between pairs of students were compared which showed a significant difference of up to 46 beats per minute in some individuals. Given that stress response has been demonstrated to have a negative impact on learning, it is important to consider the variable reaction that different individuals will have when participating in simulation training, and how to minimise the negative aspects of mimicking the clinical scenario too closely (2). Interestingly altering the format of the simulation training, didn’t appear to impact significantly on the stress response elicited, suggesting that this may not be such a critical factor.

References:
Student's perception and experience of a new knowledge-swap method of teaching and learning in medical education: An adaptation of a Swedish method
S Shahana
University of Aberdeen

Background:
A vital factor in medical school is whether or not there is an appropriate curriculum to ensure student success (1, 2). When students struggle academically, the probability of drop out increases (3). Therefore, understanding of impact of curriculum design on academic failure is important to actively prevent dropout rate (4). Among many other reasons, student satisfaction is an important factor to increase student retention or reduce dropout rate in medical education. The aim of this study is to evaluate a new teaching method to increase teaching efficiency without increasing the student’s workload to increase student satisfaction.

Methodology:
Knowledge-swap system allows students to gain knowledge on the whole body instead of only the allocated quarter by a structured knowledge exchange session and also swapping the allocated cadaver (quarter). This is an innovative teaching method which uses mainly a student-centred active learning approach with a sequential knowledge exchange blended with individual and tutor-based (to assess the learning) learning experiences. Data was collected by a student survey and was analysed to identify the key findings over a three-year period.

Results:
A new knowledge-swap method of teaching and learning was partially adopted from a Swedish method (used in Sweden for 5 years for 3rd year MBChB students but the course and the method was different) which was successfully developed and implemented in a human cadaver based 3rd year MBChB dissection based course (ME33HA) over a 3 week period. The preliminary data demonstrates efficient learning experience and knowledge gain without increasing student workload. At the end of week-3, students gained knowledge on the whole-body dissection instead of the allocated quarter-cadaver. After two weeks there was behavioral changes in students (in 2018-19 batch) where they started to re-design their dissection session themselves using this innovative knowledge-swap system and tried to reduce their workload on a daily basis. To cross validate this data, this method was also adopted for another two short master’s courses (prosection based) designed for various health/allied health professionals where students demonstrated a very similar level of satisfaction.

Discussion:
This innovative unique teaching approach, increases teaching efficiency by a student-centred active learning method without increasing the student workload. This method is also useful to reduce staff working hours, thereby would reduce institutional costs. We hope this knowledge-swap method can be widely adopted for medical students as a useful method across various institutes to reduce workload and increase learning efficiency to achieve a higher level of student satisfaction in medical education.

References:
1. Abdulghani H M et al., What factors determine academic achievement in high achieving undergraduate medical students?; 2014.
2. Lyndon M P et al., The impact of revised curriculum on academic motivation, burnout, and quality of life among medical students; 2017.
4. Vergel J et al., Influence of different curriculum design on students dropout rate: a case study; 2018.
SWAG - Sustainability Week At Gloucestershire Academy: An innovative programme to raise awareness of sustainability in healthcare for medical students
M Young, Z Brown, C Priest, L Bowen, A Gosal, C Oliver, P Davies, A Samuels
Gloucestershire Academy, University of Bristol

Background:
The General Medical Council outlines the importance of sustainability teaching for medical students in Outcomes for graduates, stating that “newly qualified doctors must be able to apply the principles, methods and knowledge of population health and the improvement of health and sustainable healthcare to medical practice.” (1) But what is medical students’ awareness of sustainable healthcare? How important do they think it is? Are they keen to learn more about it, and how can it be integrated into their teaching? The main aims of this project are therefore to raise medical students’ awareness of sustainability in healthcare, encourage students to take an active role in it, and educate on key aspects of sustainability. On review of the literature, no resources were found regarding medical students’ understanding of sustainability in healthcare. An innovative and exciting new programme has been developed for final year medical students from the University of Bristol at Gloucestershire Academy, and will be undertaken during the ‘Preparing for Professional Practice’ clinical placement in February 2019. The programme will run for 1 week alongside regular teaching, and will be named SWAG (Sustainability Week At Gloucestershire Academy).

Methodology:
Ethical approval was obtained from the University of Bristol. A programme was created incorporating several varied activities and challenges for students, including a ‘Guess the Cost’ game and daily email bulletins. Students will also be encouraged to think of solutions to improve sustainability on the wards, and will give short presentations at the end of the week to their peers, with prizes for the best suggestions. The programme will take place in February 2019, with 20 final year medical students. Pre and post intervention questionnaires with Likert scales and white space will be used to assess students’ knowledge of and attitudes towards the importance of sustainability, following thematic analysis of white space answers. UK medical schools will also be contacted to clarify how much, if any, sustainability teaching is currently included on their curricula; establishing medical schools’ current commitment to sustainability teaching. Based on GMC guidance, medical schools should have a clear commitment to this in their curricula.

Results:
Results and analysis from the pre and post questionnaires will be available to present at ASME ASM 2019.

Discussion:
Although the project is still in progress, it is hoped that after the intervention students will not only have an improved knowledge of the principles of sustainable healthcare, but also enthusiasm for involvement with sustainability and quality improvement in their future careers. There is scope to follow up with students at a later date, including once they start work as foundation doctors, to see if they have continued to harbour an interest in sustainability. In depth conclusions will be available upon full analysis of data. This work could be used to develop a programme to be delivered across the University of Bristol’s academies, and further afield. We hope to highlight the current amount of sustainability teaching in UK medical schools for educators’ interest, and also to encourage medical schools to include it if not already - perhaps via a programme similar to this. The Sustainable Development Strategy for the Health and Social Care System describes “the opportunities to reduce our environmental impacts, improve our natural environment, increase readiness for changing times and climates and strengthen social cohesion.” (2) It is therefore vital that the future generation of doctors are inspired early on in their careers to engage with sustainable practices, not only for the safety of patients, but also that of our healthcare system.

References:
The adjunct benefits of a revision symposium exploring conceptual themes for medical finals
S Pinder, M Iyenkopolar, N Ali, JAW Dalton, PA Patel
University of Leeds

Background:
Undergraduate medical curriculums are designed to provide a systematic approach to core topics and themes that enable trainees to be best equipped when commencing their medical careers. However, in view of the complexity of requirements, there are certain areas that require a more detailed exploration to consolidate learning. At the University of Leeds, we have run a revision symposium for final year students since 2012. It seeks to explore themes from a conceptual perspective with particular focus on areas that require more in-depth understanding or are commonly misunderstood. Various aids are used to consolidate learning, including handouts, videos, interactive questions and live demonstrations. Now in its 7th year, simplified feedback has highlighted that the symposium is broadly beneficial to learning. However, the purpose it serves and the mechanisms by which this is achieved has not been explored.

Methodology:
All delegates attending the 2018 symposium were offered the opportunity to sign an informed, written consent form to participate. Feedback was obtained through an online questionnaire (BOS) one month after attendance. The broad purpose of this study was to explore educational needs, learning styles and derived benefits amongst attendees. Formal ethical approval had been granted by the School of Medicine Ethics Committee (MREC16-128).

Results:
59% of attendees (92/156) provided informed consent. Of these, 64% (59/92) completed the questionnaire. 60% (53/59) attended primarily for revision purposes, and 17% (15/59) because they struggled with particular topics. 58% (34/59) had a predominant visual learning style, with a minority (10%, 6/59) preferring kinaesthetic. Of the presentation methods, 27% (32/59) found flow charts most useful and 23% (27/59) mnemonics. Neurology (19%, 33/59) and cardiology (18%, 31/59) were deemed to be the two most beneficial topics. Overall, 92% (54/59) would recommend the session to others. A full exploration of quantitative and qualitative data shall be presented in poster format.

Discussion:
Overall, preliminary findings indicate that a revision symposium that specifically explores challenging conceptual themes is of benefit as an educational tool. Further studies through the use of focus groups may be helpful in exploring its utility and broad applicability within national undergraduate curriculums.
The Effectiveness of Peer to Peer Learning and finding of best practice to manage Fatigue.

J Rudin, Z Robertson, J Fisher
Northumbria Healthcare Trust and Newcastle University Medical School

Background:
The issue of Fatigue is becoming an increasingly key topic for the medical profession. In a recent publication by the Royal College of Anaesthetic (RCoA) “A Report on the welfare morale and experience of anaesthetises in training: the need to listen.” [1] Their main recommendations were on how trainees look after themselves, especially fatigue in the workplace. Therefore understand fatigue, its potential impact on performance and strategies to manage it, is crucial for final year medical students as they will soon be practising as fulltime clinicians, working shift patterns that are likely to contribute to fatigue. The aim of this research is to assess how effective peer to peer teaching from foundation/trainee doctors to final year medical students on the topic fatigue and from their experience and suggested recommendation develop strategies to managing fatigue during night/on-call shifts. Then using these skills from the peer to peer experiences and royal college recommendations will improve the transition of final year medical students in working life as a foundation doctor.

Methodology:
A pre-session questionnaire was completed prior to the peer to peer workshop to understand the surface level of insight into fatigue from the final year students and also the foundation/trainee doctors. The information was used to tailor the introduction presentation that was given at the start of the peer to peer workshop, given to both final year medical students and foundation/trainee doctors. Two workshops consisted of 20 final year medical students and 4 trainee doctors, F2 to fellow grade in December 2018. After the introduction presentation, the fish bowl technique was used with the trainee doctors placed in the inner circle and the outer circle consisted of the final year students. During this section the foundation/trainee doctors discussed their current management of fatigue prior, during and after an on-call/night shift. The final year medical students listened and documented any key statements, if they wished to ask more details they joined the inner circle and then returned to the outer circle. The groups then feedback to the each other their findings and we can conclude the session by giving a presentation regarding the key recommendations from the royal college findings. After the workshop a number of focus groups were carried out with volunteers final year medical student who attended the fatigue workshop to analysis and discuss the effectiveness of the peer to peer session with the management and awareness of fatigue in the workplace.

Results:
Pre-session questionnaire highlighted key points that final year medical students were aware of their entitled breaks, facilities and how long it takes to recover from night/on-call shifts. The foundation doctor questionnaire main finding that 92% believe on-call/nights shifts is impacting their physical and mental health. Post session questionnaire the medical students highlights that the students felt the session to be beneficial and provided good insight into the topic fatigue. From the focus groups with the medical students the main results highlighted that peer to peer learning is an effective tool for discussion and management of fatigue in the workplace for final year medical students.

Discussion:
It can be concluded from the results that peer to peer learning is an extremely effective method when using medical professionals to discuss with final year medical students the effect of fatigue in the workplace and suggest recommendations in managing fatigue for the medical students future professional working. Further work will use the evaluated results to structure and improve future ‘Fatigue Workshops’ with the medical students, aiming to run across the Newcastle University.

References:
Background:
Being on social media platforms has become more of a growing necessity especially for university going students these days. Social media, an increasingly growing phenomenon, has crawled into the daily lives of people in all fields[1]. It is mainly students who tend to fall victim to excessive usage of these media platforms. This is because they use these platforms for not just entertainment purposes, but also for meeting their academic and learning needs. This is also true for medical students, keeping in mind the ever-evolving and expanding nature of the medical field, as they are required to keep themselves informed and updated with all the latest advancements in the field. However, many medical students tend to overuse these mediums which overtime can cause distraction and lead to addiction which, in the long run, might impair the ability to concentrate in medical students[2].

Methodology:
A cross-sectional study was conducted on first, second, and third year medical student, both male and female, enrolled in Alfaisal University, Riyadh, Saudi Arabia. Stratified sampling technique was employed and a response rate of 35% was set to collect the data from 251 students out of 723 students. The randomly selected subjects were voluntarily asked to fill out two questionnaires, one measuring social media addiction adapted from the Internet Addiction Test (Cronbach alpha= 0.886)[3][4] and the other measuring concentration deficit adapted from a Concentration ability questionnaire (Cronbach alpha= 0.79)[5]. The IAT consisted of 20 questions while Concentration questionnaire comprised 15 questions.

Results:
Data collection process is in process and expected to finish by next week. Data analysis will then be performed immediately. It is requested to please allow us to submit Result, Discussion and Conclusions till 3rd Feb 2019.

Discussion:

References:
The Role of Radiology in Undergraduate Medical Education: A Systematic Review
C Chew, P Cannon, PJ O'Dwyer
University of Glasgow

Background:
Radiology is central to the practice of modern medicine - as a diagnostic and prognostic tool. It has been espoused as an excellent tool for medical education since the 1960s. Advances in technology, increased access to imaging modalities (CT/MRI/PET-CT) and the advent of electronic picture archiving and communication systems (PACS) mean it has never been easier to use Radiological images to demonstrate normal anatomy and clinical pathology in exquisite detail to medical students. Using images of living anatomy, it is easy to see and learn anatomy, physiology, clinical reasoning and diagnosis in a safe manner, encouraging authentic learning. Doctors are expected to be able to read and act on radiological images upon graduation. Great variation exists in the inclusion of Radiology in the undergraduate curriculum - with international and regional differences. Some Universities have embraced Radiology, embedding it as a vertical or spiral theme while others have no radiology exposure at all. The aim of this study is to evaluate the incorporation and utilisation of Radiology in the undergraduate medical education.

Methodology:
The following databases were searched for relevant studies: MEDLINE and In-Process & Other Non-Indexed Citations via Ovid, Embase 1947-Present, updated daily via Ovid, the Cochrane Database of Systematic Reviews and the Cochrane Central Register of Controlled Trials via Wiley Interscience, and the Education Resource Information Center and British Education Index both via EBSCOhost. All databases were searched on 6 November 2018. The search strategies used both text words and relevant indexing related to radiology, medical students and the curriculum.

Results:
2288 records were identified through the database search. 1528 records were screened and 652 full text articles were assessed for eligibility. The majority of articles were descriptive studies or surveys. Although few true experimental papers were identified, many authors included program evaluations. Most records originated from America and Europe, with 15% from UK. Radiology is used frequently as an adjunct to Anatomy teaching. American and European universities offer compulsory or elective clinical clerkships in Radiology, while this is not described within the UK. Many formats for engaging students using Radiology are described, with good student engagement and acceptance.

Discussion:
Radiology is an acceptable and well received method to teach undergraduate medicine. Although it is widely used internationally, the UK appears to lag behind the rest of the developed world in incorporating Radiology into teaching of clinical medicine. More research into why this is and how to improve Radiology inclusion is suggested.

References:
Thematic analysis of student reflections on clinical cases during a psychiatry placement
J Cunliffe, J Barker, W Melton, H Crimlisk
The University of Sheffield

Background:
There is extensive literature examining the role of reflective practice in medical education, which draws attention to the importance of reflection in supporting acquisition of knowledge and skills from the 'informal' and 'hidden' curricula. Yet extant research has focused mainly on the practice of reflection in the context of critical incidents, and there is a significant gap in the literature regarding the role played by reflective practice in the context of clinical cases (1,2). University of Sheffield medical students are required to undertake a psychiatry placement in their third year. During this, they are required to document six clinical cases in their e-portfolio, and to complete unstructured reflections regarding their learning needs or the emotional impact of the consultation. This case therefore provides a pertinent opportunity to examine the scope and depth of student reflections in the context of clinical cases regarding the themes of the 'informal' and 'hidden' curricula.

Methodology:
A total of 1364 reflections were written by 222 students. A simple random sample of 150 reflections was taken for qualitative analysis, with contextual and thematic analysis performed. Saturation of themes was met within this sample. The initial intention was to use the themes from previous analyses of student psychiatry reflections as a base, however, these themes were not consistent with those in the sample. Therefore, a new codebook was developed iteratively by the research team. Themes were discussed between members of the research team in order to achieve consensus. Inter-coder reliability was established via pre-commencement and post-completion checks.

Results:
The research team classified 85 reflections (66.4%) as relating to the formal curriculum, 19 (14.8%) relating to the informal curriculum and 2 (1.6%) relating to the hidden curriculum. 18 reflections (14.1%) related to both the formal and informal curricula, and 4 (3.1%) related to both the formal and hidden curricula. Analysis identified 4 major themes, which included a total of 44 sub themes. The largest theme, which included 38.8% of codes related to student experience. Student learning made up 22.8% of codes, 20.5% of codes related to consultation skills, and 17.8% related to patient factors.

Discussion:
The study found that reflection is an important tool for developing individual clinical skills and reasoning, i.e. for supporting the 'formal' curriculum. However, the results suggest that reflections on clinical histories did not effectively engage students with the intra- and inter-personal dimensions of informal and hidden curriculum. Overall, the study suggested that to foster deeper engagement with the informal and hidden curriculum, students should be required reflect on critical incidents, rather than clinical cases. The findings have a broad significance for medical educators in general; and changes to local reflective practices have been adopted as a result of the research.

References:
"To Me, To You“ Improving Medical Students' Oral Case Presentation Skills
C Maclver, J Choulerton, R Hodnett, H Hall, C Stewart, Z Craft
University of Bristol Academy, Royal United Hospitals, Bath

Background:
Oral patient case presentations are one of the most important modes of communication between Doctors(1) and can influence the quality of patient care, however the skill of presenting patient cases is inconsistently taught in Medical School. It has been shown that students often learn oral presentation skills by ‘trial and error’ and tend to present patient stories governed by order, rather than using them to help devise a diagnostic plan(2). This can mean that important details are omitted and extraneous details included in oral case presentations(3). During a recent survey of 3rd year undergraduate University of Bristol medical students on their Junior Medicine/Surgery placement at Bath Academy, 100% of students agreed that further dedicated teaching on oral case presentation skills would be a useful addition to their curriculum. We are piloting a focused teaching programme with the aim of improving students’ ability and confidence in presenting on ward rounds and using the ‘SBAR’ (Situation, Background, Assessment, Recommendation) format to hand over more acutely unwell patients.

Methodology:
The programme includes two separate teaching sessions; the first focusing on a ward round-style oral case presentation, and the second focusing on a more condensed ‘SBAR’ oral presentation format for handing over an unwell patient to a colleague. In both sessions, medical students will initially receive a Clinical Teaching Fellow-led session in an interactive lecture-based format centered on the principles of giving an effective oral case presentation. For the first teaching session, students will work in small groups with a simulated Medical/Surgical clerking, and be asked to prepare and deliver an oral case presentation from the information provided that would be suitable for presentation on a Consultant ward round. Students will also be encouraged to bring their own patient clerkings along for further practice. The second session will be more geared towards gaining presentation skills for effective medical handover to a colleague; students will formulate oral presentations in an ‘SBAR’ format based on scenarios in the style of FY1 on-call entries made for unwell ward patients. The presentations will be assessed by the students’ peers and a Clinical Teaching Fellow in each teaching session, with points awarded for inclusion of relevant detail and deducted for the addition of unnecessary information using a pre-determined mark scheme. A pre- and post-teaching intervention questionnaire will be distributed to the students based on the Likert scale(4) assessing their knowledge of, and confidence in, oral case presentations.

Results:
Results from the student questionnaires and feedback on the teaching sessions will be available for poster presentation at the ASME Conference 2019. It is expected that student confidence in giving ward round and medical handover style oral presentations will improve and that the sessions will be made available for use in other years of the undergraduate medical course.

Discussion:
Our project pilots a method of teaching oral case presentation skills to medical students from the University of Bristol, using both a format suitable for use on ward rounds and also an ‘SBAR’ structure for the effective handover of unwell patients. We expect that these teaching sessions will provide a ‘safe’ place for students to develop their oral presentations skills and receive constructive feedback on their performance, which should increase their confidence on commencement of the Foundation Programme. We hope that this teaching programme could then be delivered to other undergraduate years within the University of Bristol.

References:
To what extent do newly qualified doctors feel prepared to care for mothers diagnosed with a stillborn baby.
S Agnihotri
QMUL

Background:
The doctors interviewed are the non-training grade and the scenario is of their first or most memorable encounter with the mother. The study looks at the immediate care of these mothers after they have been diagnosed with the pregnancy loss defined as a baby having died after 24 weeks of pregnancy. A literature review was undertaken using search terms including references to medical training, preparedness, breaking bad news, pregnancy loss of all ages, communication and moral injury (a feeling of being unable to provide high quality care.) Losing a baby is a complex and painful life event with wide reaching and long term sequelae for the mother, her partner, family and friends.

Perinatal loss, having a stillborn baby, is both a highly emotive & sensitive part of the field of medicine and in my pilot study, doctors in training stated that the experience is uniquely different from other scenarios where there is a loss of life. Statistically, pregnancy loss is a common medical scenario, 15 stillbirths are reported daily in the UK (MBRRACE.) When the numbers of other pregnancy losses namely miscarriages, ectopic pregnancies, neonatal deaths etc are considered, the figures increase, so a trainee doctor will inevitably care for a bereaved mother.

Historically, the diagnosis of a pregnancy loss has been made in a variety of clinical settings for example, the emergency room, general practice, and medical departments other than obstetrics and gynaecology. In the event that a stillbirth is suspected, the mother will be referred to the maternity or obstetric team for further care including the delivery of the stillborn baby. The trauma of delivering a stillborn baby is far-reaching, with long-term psychological, emotional, financial and societal ramifications. Anecdotally, as the lead for the perinatal service, I have heard during debriefing sessions that members of the multi-professional team caring for the bereaved mother feel affected by the event, hence the importance of ensuring that they are equipped to manage their own grief in addition to that of their patient and her family (Bakhbaki 2017). The on-call trainee is inherently the first doctor to meet the mother and confirm the diagnosis of the death of her unborn child. The doctor involved in the mother’s care is often a non-training member of the obstetric medical team ie a foundation doctor or an ST1 to 2 trainee. Less experienced staff are more vulnerable to the effects of moral injury. Traditionally, training has focussed on delivering a live born baby, which is at odds with stillbirth. Breaking bad news training has focussed on sick or dying patients not babies. Moral injury has been shown to result from witnessing human suffering, and is associated with burn out. In addition, the phenomenon results in desensitisation or loss of empathy, which has been described by the recipients of care in Heazell’s paper. Training increases confidence and preparedness which in turn empowers the physician as if they feel they have a specific purpose, the impact of moral injury is reduced (Murray 2018).

Methodology:
From the literature reviews undertaken, it is evident that little research has been done in this aspect of physician training. Therefore, it follows that there is little research about the impact of the clinical scenario on the doctor. The doctors studied are part of a focus group which explores

- their personal experience as the doctor caring for the bereaved mother,
- Along with their preparedness for the clinical scenario, ie what teaching or training they had received,
- How this impacted on them,
- Whether there is a place for additional educational training to prepare the doctor, and if so what, how much and when? IPA will be used to analyse the data.

Results:
The pilot study of trainee doctors reveals an area of development need for general medical training.

Discussion:
The care a bereaved mother receives impacts on her health & little research has been done in this aspect of physician training.

References:
Bakhbaki, D. et al (2017); “Learning from deaths: Parents’ Active Role and ENgagement in The review of their Stillbirth/perinatal death” (the PARENTS 1 study); BMC Pregnancy and Childbirth 17(1): 333


MBRRACE-UK (2017); Perinatal Mortality Surveillance Enquiry - Term, Singleton, Intrapartum Stillbirth and Intrapartum Related Neonatal Death” –

https://www.npeu.ox.ac.uk/mbrrace-uk/reports


Transforming induction for medical students with the use of in situ simulation
L Bowen, C Priest, Z Bush, M Young, A Gosal, C Oliver, P Davies, A Samuels
University of Bristol/ Gloucestershire Hospital NHS Foundation

Background:
Induction is key for the preparation of medical students on a new clinical attachment. Whilst there is no published data exploring medical students’ perception of non-speciality induction, a similar process for junior doctors has been described as being formulaic and uninspiring (1). An interactive induction programme for medical students has been shown to be helpful and leave them feeling more confident in starting their attachment (2). By their final placement of medical school, the induction process as well as simulation training are familiar to the students. We are looking at an innovative way of combining these two separate entities to improve the student experience of induction by immersing them into the clinical environment. In situ simulation involves conducting simulation in the clinical environment and is expected to increase fidelity and therefore learning (3). It has been argued that in situ simulation is more effective for educational purposes than other types of simulation settings (4). Until now there is no literature comparing or evaluating students experience of in situ simulation during induction. The aim of this study is to incorporate in situ simulation into the induction programme for medical students and then assess the impact of this novel idea on the students’ experience.

Methodology:
In Gloucestershire, 22 final year students were randomised to either control group or intervention group. The control group received the usual induction to clinical placement whilst the intervention group received this induction plus an in situ simulation scenario. The simulation was set in the clinical environment relevant to their placement. Following induction, the students’ experience of induction was assessed with the use of a questionnaire and a focus group. We evaluated whether students enjoyed their induction, found it a productive use of their time and if they thought that they had learnt useful information that was transferrable to their new clinical placement. Questionnaires were analysed quantitatively by comparing scores within different categories and qualitatively by using thematic content analysis to evaluate the answers to white space questions. Focus group discussions were analysed using thematic content analysis.

Results:
Students responded positively to the in situ simulation and preliminary data suggest that its inclusion significantly improved the induction programme experience. Full data will be available for presentation.

Discussion:
Preliminary data suggests that students enjoy the experience and feel that its addition benefits their induction programme. Further evaluation of data will determine students’ perceptions of why that is and identify learning points for use in developing future induction programmes. Here we share an idea that can easily be transferred to other universities, hospitals and professional bodies.

References:
Transition Into Practise
A Hopkins
East cheshire NHS

Background:
It is widely recognised that UK medical graduates feel unprepared for clinical practise, and other healthcare professionals often deem them as such (Monrouxe et al., 2017). We must design educational schemes which will improve their skills and confidence, as unpreparedness and lack of confidence in clinicians can lead to error and increase morbidity and mortality. Medical students who undertake their post-finals placement at our trust have no dedicated teaching time tailored to their needs which is negatively impacting on preparedness for practise.

Methodology:
This study aimed to evaluate whether Manchester medical graduates are prepared for clinical practice. Focus groups with current foundation doctors and medical students helped identify areas of concern/lack of preparedness. Based on the information gathered from the focus groups, an educational scheme was designed. Tailored to their needs, a “Transition Into Practise” teaching scheme was set up over 8 weeks covering key topics not currently addressed in the undergraduate teaching curriculum. A number od experienced, enthusiastic tutors were recruited to lead each session. The following areas were covered: 1) Ideas concerns and expectations: A question and answer session regarding preparedness for practise. 2) Prescribing at the level of a foundation doctor. 3) Ward based teaching session designed for individuals to improve upon specific clinical skills. 4) Horus and The Foundation programme portfolio 5) Work-Life balance in foundation years 6) The approach to the sick patient and on call scenarios. Pre and post-course questionnaires used a modified likert scale to measure the impact of the course on preparedness for practise. Additional questionnaires measured the impact of individual sessions. The final questionnaire also asked students to rate the course in terms of quality and content and encouraged free text remarks, allowing students to provide qualitative feedback.

Results:
Most notably, a rating of 4 or 5 for overall confidence for commencing FY1 increased from 20% to 95%. 100% of students gave a rating of 4 or 5 for course content, with 75% rating content as excellent and 80% giving a rating of 4 or 5 for the overall quality of programme. 100% of students felt more confident in clinical skills. The feedback comments were positive for example; “I feel much less anxious about starting FY1”, “I feel much more confident”.

Discussion:
The aim of the course was to improve preparedness of our medical graduates' by offering a unique teaching opportunity which addresses their real concerns. There is no doubt that this educational campaign did improve preparedness for practise, however results suggest students still do not feel fully confident across all domains. A gap in the undergraduate curriculum has been highlighted, improvements must be further made to the assistantship structure, with the overall aim of curriculum change being to improve patient safety through safe practice. We suggest that a more substantial programme is established, consisting of more sessions covering a wider range of topics.

References:

Board: VS
Understanding myself in the workplace - can an innovative half day workshop help final year medical students feel more prepared for transition to working as a junior doctor?
K Jarrett-Peet, K Murphy
Medical Education Centre, Pinderfields Hospital, Wakefield.

Background:
Medical training is a stressful process, resulting in high levels of mental health problems and burnout. It has been suggested that medical student resilience is lower than in the general population, and poor coping mechanisms can be a contributing factor to workplace stress (1). Evidence demonstrates that poor mental health and burnout can have a negative impact on patient safety, and so needs to be addressed as an organisational as well as individual problem (2). It is now better recognised that burnout can begin in medical school, and early intervention is recommended to prevent this (3). Resilience training prevents burnout, but this is often introduced after students have graduated and are already practicing as doctors. We have created a workshop to see if early intervention can help students to feel more prepared to deal with the stressors of junior doctor life.

Methodology:
This half day workshop was designed for groups of 8-10 final year medical students at Pinderfields Hospital. It was designed and delivered by junior doctors currently in a Clinical Fellowship in Medical Education roll. The workshop used a combination of interactive exercises and lectures to examine the effect of personality type, communication styles and stress in the workplace as well as exploring how well-being and resilience can be increased to help cope with challenges in the student’s future career. The workshop consisted of;

- Exploring personalities - the students were asked to fill in a simple personality questionnaire which described them as one of four types. The benefits and limitations of working with each of these personality types was then discussed.
- The effects of stress on the performance of tasks -students were asked to complete simple tasks whilst under the constant threat of a balloon being popped with a pin. The physiological and psychological effects of stress on performance of tasks was then discussed. Students explored how stress in the ward environment may affect clinical task performance and situational awareness.
- Resilience and well-being - during this interactive lecture the concepts of resilience and well-being were explored, threats to well-being as a junior doctor were discussed. The session then gave advice about keeping mentally well, “top tips” were given for working life by previous junior doctors and sources of help discussed. Verbal and non verbal communication - The group was divided into two and games were played to encourage good communication between team members. The importance of communication skills identified was then related to clinical practice. Students completed written feedback at the end of the session. A likert scale was used to score the students responses.

Results:
A pilot session was run with 7 students; All of the students strongly agreed that they:
- enjoyed the session
- gained a greater understanding of the impact of communication styles and personality types on team dynamics

6 students strongly agreed or agreed that the session helped them:
- learn more about themselves
- understand how stress may affect their performance at work
- gain an understanding of the importance of resilience and well-being in the workplace
- think about how they can maintain their well-being when starting work as an FY1
- Feel better prepared for the challenges of FY1

One participant in the session remained neutral throughout most of the feedback domains

Discussion:
Initial results from the pilot session showed a very positive reaction and outcomes. During the half day session we were able to help the vast majority of students increase their understanding of communication styles, resilience, wellbeing and gain more insight into their own personalities. We were particularly pleased that the session resulted
in 6/7 students feeling more prepared for the anxiety provoking transition from student to junior doctor. Over the coming weeks we will deliver the session to the remaining final year students and continue to collect feedback.

References:
Why medical students change career preferences: A phenomenological study

H Alberti, A Singh
Newcastle University

Background:
Medical career preferences are influenced by a multitude of factors. Currently, several specialties are undergoing recruitment problems, therefore we must develop our understanding of medical career decision-making to ensure the production of an appropriate workforce. Arguably, the purpose of medical education is to ensure there are sufficient numbers of competent, safe doctors in each specialty in order to meet the needs of a population and deliver effective care. As such, it is crucial for medical educators to understand how medical graduates make decisions about their career choice. We aimed to explore the changing career preferences of students during medical school, in order to better understand this.

Methodology:
This interpretivist study used a phenomenological approach to address the research enquiry. Final year students from one UK medical school who had expressed a change in their career choice during medical school were purposively sampled. Qualitative data was collected through semi-structured interviews with seven students to explore why their career preferences had changed during medical school. Transcripts of these interviews were thematically analysed.

Results:
Three overarching themes with five subthemes were formed from the analysis. The three overarching themes were the influence of medical school (sub-divided into the influence of clinical teachers and the influence of the curriculum and placements), perceived suitability to specialty (sub-divided into enthusiasm and priorities, personal characteristics and perceptions of specialty characteristics) and belonging and fitting in. A thematic map captured the participants’ perceptions on why their preferences had changed with major influences echoing existing research. Novel findings included participants’ personalities and enthusiasm changing over time, the need for a ‘sense of belonging’ and participants defining the term ‘variety’ uniquely and perceiving their current specialty preference to match their definition.

Discussion:
This was an original, in-depth study on changing career preferences; an ill-defined subject within the literature. Analysis revealed preferences changed for a variety of medical school, personal and specialty reasons, leading to the construction of an updated model of medical career decision-making. This incorporated the three themes - the ‘influence of medical school’, ‘perceived suitability to specialty’ and ‘belonging and fitting in’. Medical career preference remains a dynamic, complex and ever-evolving phenomenon, influenced by an intricate interplay of internal and external factors. Medical career decision-making is an important field of work if we are to ensure that medical schools are producing an appropriate workforce to meet the present and future demands of our healthcare system.
TEL Abstracts presented as e-Posters *(themed within TEL)*
Harnessing the power of artificial intelligence to drive innovation in undergraduate medical education

A Sheikh, R Adel

Background:
Artificial intelligence is threatening to revolutionise every corner of our lives, affecting the way that we live, work and play. In the context of healthcare, the technology is increasingly being used in a number of specialities, from detecting early melanoma in dermatology (1) to reporting pathology from chest radiographs with impressive levels of accuracy (2). As development continues, artificial intelligence is likely to fundamentally affect the way that healthcare is organised and delivered as part of a modern NHS. It therefore wouldn’t be a stretch to imagine that the technology will play a significant role in medical education, as we come to grips with its potential to enhance knowledge acquisition, decision making and psychomotor skills. We propose the use of a tailor made ‘chat-bot’ as a tool to enhance history taking, communication and decision-making skills as part an interactive learning package designed for undergraduate medical students.

Methodology:
We developed our chat bot by using Microsoft QnA Maker with the Azure bot service providing the back end. The database was pre-programmed using detailed scripts and phrases in order to reflect a realistic patient encounter. The bot was then trained by using multiple phrase variations in order to anticipate potential user inputs and allow for conversation to flow naturally. The bot was packaged as an interactive learning resource which was supplemented using images and videos in order to simulate the whole process of a clinical encounter from history and examination all the way through to differential diagnosis and management. The package was optimised, so that it would be available to students on-demand across a range of platforms in order to encourage use.

Results:
Prospective data would be collected before, during and after the interaction with our learning package in order to assess confidence with the given clinical presentation, test ability to gather information and understanding of the case. Qualitative data would also be gathered about accessibility, ease of use and perceived usefulness of the bot as a learning tool.

Discussion:
We propose that artificial intelligence could be used to design increasingly sophisticated clinical encounters which can cheaply and quickly emulate any number of conditions to meet the learning needs of a particular group. This could be used to supplement existing learning materials and used on demand by students to develop and consolidate knowledge in problem areas. The technology could also help to address the need to develop confidence with the assessment and management of rare but clinically important conditions, where exposure can be sparse, within a safe environment.

References:
Making Technology Enhanced Learning work in the acute clinical setting: delivering the promise.
T Hossain, E Cox, L Velauthar, J Malawana

Background:
Technology Enhanced Learning (TEL) already has a place in healthcare education. In a systematic review, several barriers were identified to the uptake of e-learning, ranging from psychological, economic and pedagogical. Resistance to e-learning may have developed from the lack of technical and administrative support in implementation, poor quality content and pre-conceptions about the lack of personal interaction to help learning.[1] The Medics.Academy team worked with Barts Health - specifically the Maternity Team at Newham Hospital, to solve problems with training, maintaining core competencies of their midwifery staff. In the UK, perineal trauma, either spontaneously or via an episiotomy was reported at 85% of births, many requiring repairs. Perineal trauma is associated with increased maternal mortality as outlined by the OASI guidelines [2][3]. Although perineal repair is a part of the NMC competencies[4], only 6% of midwives in a survey of 323 were using the correct suturing technique.[5]

Methodology:
Team based approaches, looking at educational needs in acute settings, led to TEL introduction. Medics.Academy worked with LV and JS, to develop an integrated programme in the clinical environment. The Medics.Academy team reviewed the needs of the department and developed mechanisms to roll out training, combining TEL with the practical skills. A suite of tools were developed to provide integration of the training into the acute environment, combined with tools to manage the programme and monitor compliance. Prior to the course, testing was undertaken via online software delivered through participants’ smartphones. Video based training was delivered, followed by a significantly reduced physical workshop. Post practical and delayed testing using smartphones completed the programme.

Results:
Similar to other TEL studies, results from testing demonstrated a significant difference (P= 0.001) between the test before the course and after the practical. The average group result increased from 66.5% to 83.1% and the standard deviation decreased by 1.5. Midwives provided feedback improving the process. Responses included comments on satisfaction with flexible, independent learning management as well as an ability to revisit material with ease before attending the practical course.

Discussion:
This study demonstrates how TEL is able to deliver education in pressurised NHS settings. The Medics.Academy team has gone on to use this methodology. Wider use of this methodology could result in saving healthcare organisations significant resources. The integrated methodology allows healthcare professionals independence in their learning resulting in better engagement and retention of information. Immediate cost saving aspects to the introduction of the methodology, including lower venue hire, lower locum staffing costs, reduction in travel for specialist training, ease of access of staff and compliance tracking. Real time compliance tracking allowed clinical oversight ensuring uptake is monitored and compliance resources were targeted. It is vital TEL Programmes are not delivered in isolation, without roll out and integration methodologies. Partnership between the maternity department and Medics.Academy aimed at using valuable clinician time efficiently. Development of technology enhanced learning, designed for roll out into acute clinical settings, requires an integrated approach, focusing on development of online tools and content mapping. Basic surgical training can exceed Â£1000 per day when including all costs including inefficient use of staff time.. Through appropriate use of TEL, combined with an appropriate integration strategy into clinical practice, that cost can be reduced to 25-50% of the original costs. The use of TEL is being explored in surgery and is becoming more integrated in undergraduate teaching [8]. The challenge solved by Medics.Academy integrates the use of TEL, into acute clinical settings, showing the elusive cost benefits to the NHS.

References:

Mini Poster: ASM-TEL4
O&G Handbook App; A pilot project
R Howitt, R Tomlins

Background:
Modern medical working life calls for instantly accessible information and guidelines. The widespread use of mobile devices within the clinical setting highlights the enormous potential for developing interactive mobile apps. Junior doctors rotate through multiple specialities and sites, this poses challenges that can be felt acutely in Obstetrics & Gynaecology, a fast-paced and demanding specialty that many doctors may not have encountered before. We highlighted a need for a robust, reliable induction tool at the Royal Alexandra Hospital that was portable and in-line with modern clinical practice that could provide accessible information for junior doctors.

Methodology:
Using an online host site, we’ve developed a freely downloadable app for smartphones and tablets that includes clinical and non-clinical areas. Clinical sections provide concise information on common scenarios encountered in the Emergency Department, Maternity assessment and on the wards to guide first-line diagnosis and management. Each topic area provides an interactive educational guide, embedding PDF local guidelines and proformas and disseminates essential site-specific information to enable a consistent approach to clinical management. The app includes step-by-step guides and troubleshooting sections for clinical skills including speculum examination and assistance in c-sections. Diagrams and graphics are included for visual learners and add an interactive element to the information presented. Non-clinical sections are dedicated to hospital specific orientation material and induction information for specific duties and responsibilities.

Results:
Following the pilot release in Spring 2018 we received excellent feedback from clinical staff at all levels and surveyed users for additional subject suggestions and improvements.

Discussion:
As a pilot project O&G Handbook app has proven to be a new and exciting method of disseminating educational material to junior doctors at the Royal Alexandra Hospital. Feedback from app users confirmed appreciation for easily accessible, guideline-led specialty information and we look forward to expanding the project over multiple sites.
Shaking up Immunology Teaching at the University of Aberdeen
D McClurg, R Hughes, S Hapca, D Bean, D Wandless, I Crane, S Stone

Background:
A thorough understanding of the immune system is critical within medical education and learning to apply the pathophysiology of aberrant immune function is relevant across all systems. Despite this, the complexity of immunology is often seen as difficult and confusing to medical students [1]. Within modern medical curricula, there is an increasing amount of content to cover. This can result in teachers resorting to imparting information to students, rather than enabling students to gain an in-depth understanding of subject matter [2]. At the University of Aberdeen (UoA) Medical School, immunology has been traditionally taught within twelve, one-hour lectures between 1st and 3rd year supplemented by a written handout of key learning points. Previous students have reported that the pace and delivery of information within these lectures can be overwhelming [3]. Lectures can be an effective way to communicate facts to large groups, however, they have also been criticised for encouraging passive learning, and students can find the repeated use of lectures disengaging. In addition, it is estimated that only 5% of lecture content is retained in the long-term [4][5]. A new approach to teaching known as ‘blended-learning’ has gained momentum. The most widespread form, ‘the flipped classroom’ supplies learners with core knowledge for self-study prior to face-to-face contact [6]. This liberates face-to-face sessions to facilitate deeper engagement and application of learned material. Our aim was to enrich immunology teaching and learning at the UoA by creating a blended learning approach for the 3rd year curriculum.

Methodology:
Multi-modal self-study e-learning modules were produced in collaboration with the Medi-CAL unit using audio-recorded scripts, animation and annotations. Modules build on prior student knowledge and introduce new learning at a student-led pace. Modules were developed within six areas; an overview of the immune system, the innate immune system, the adaptive immune system, hypersensitivity, autoimmunity, and transplantation. Each finish with formative quizzes to allow students the opportunity to test their understanding and retention of information. In addition to the basic science concepts explained within the e-learning modules, anonymised clinical problem-solving cases were developed to enable students to apply their knowledge of immune system pathophysiology within a clinical context. Prior to the launch of the new curriculum, the ‘Introduction to the Immune System’ module was piloted with 3rd year medical students to gain feedback on the usability and perceived educational benefit of materials produced.

Results:
The Introduction to the Immune System module was piloted with 6 student volunteers from year 3 MBChB using standardised pre-module and post-module questionnaires. Participating volunteers included those at both postgraduate and undergraduate level, and a mix of female and male students. Within the pre-module questionnaire, most students (n=5) felt that Immunology was a subject that they did not understand well. In addition, all participants reported that they enjoyed using e-learning as a modality for learning new material. Within the post-module questionnaire, students ‘strongly agreed’ or ‘agreed’ that the Immunology e-learning resource was easy to understand and easy to use. All students stated they would recommend this resource to a friend and found the module enjoyable. Students were complementary regarding the use of animations and audio explanations used, however suggested a greater use of labels to aid clarity to the material included.

Discussion:
Students were positive about the provision of the e-learning materials developed to supplement their learning within Immunology. Robust evaluation of the changes to the immunology curriculum will be important to ensure widespread pedagogical benefit from the approach, and to guide the best use of on-going face-to-face sessions.

References:
3. SCEF feedback from 3rd year Immunology teaching, University of Aberdeen Medical School, 2018
5. Swanwick, T. Understanding Medical Education: Evidence, Theory and Practice. 2010
Use of Virtual Reality in Surgical Education Focusing on Non-technical Skills Training
U Keshwala, V Dimitrova, N Quinton

Background:
There is a strong consensus that developing effective non-technical skills (NTS) will be paramount in future surgical education, in addition to core clinical and technical skills training [1, 2]. NTS are ‘the cognitive, social and personal resource skills that complement technical skills, and contribute to safe and efficient task performance’ [3]. Alarmingly, failures in NTS for surgeons are not uncommon: analyses of adverse events demonstrate that underlying causes are often attributed to NTS, such as teamwork, leadership, communication, and decision-making, rather than technical skills [4, 5]. Due to a decrease in total surgical training time, and subsequently reduced surgical exposure, developing NTS effectively becomes an immensely challenging task. Technology, such as virtual reality, can offer innovative ways to address this challenging task. However, the adoption of new technology depends on medical professionals who can be sceptical and reluctant to change training practice given the growing intensity of their workload. Hence, the purpose of this study is to identify areas where the application of virtual reality can be introduced into surgical education, specifically with regard to NTS. The selected technology is 360° videos which offer affordable ways to embed virtual reality in surgical education. Today’s millennial trainees often depend on videos to recreate operative scenarios and techniques in anticipation of foreseeable experiences [6], suggesting that a novel delivery of NTS training through 360° videos may be a potential learning aid. Using example 360° videos, the study explores surgeons’ attitudes to the use of this technology to address key NTS training needs.

Methodology:
A qualitative study design was used. Surgeons were recruited via convenience sampling; semi-structured interviews were conducted with participants, which were audio recorded and transcribed verbatim. Interviews involved participants wearing a head-mounted display (HMD) to view an example 360° video for surgical training. Thematic analysis was carried out on the transcriptions to produce codes and derive the main themes.

Results:
Three main themes were identified: (1) Insufficient NTS training and the need for its improvement; (2) perceived challenges of using 360° videos to train NTS; and (3) perceived benefits of using 360° videos to train NTS. Participants demonstrated a range of views on the use of 360° videos, including benefits and challenges of using such technology in surgical education. Participants acknowledged the crucial role of NTS and its insufficient training within surgical education, pointing specifically at coping with stress and fatigue. Participants felt that 360° videos provided an engaging and immersive experience that could be used for NTS training with orientation of operating theatres, developing empathy, difficult consultations, and alternative uses included training healthcare professionals in developing countries. However, participants raised concerns about the cost of 360° videos, the potential lack of interactivity, and that adoption of virtual reality must be accompanied with an adequate training programme.

Discussion:
The immersive, engaging and accessible features of virtual reality in general, and 360° videos specifically, which were described by the participants demonstrate there would be value of its use in surgical education to train NTS. The key concern is the development of interactivity, which is needed in surgical training. This should involve the key stakeholders to improve the design and evaluation providing crucial feedback and areas for adoption. Further research is needed into the real-life effectiveness of 360° videos in surgical training and its impact on NTS, and how it can be integrated into surgical training. The areas suggested in this study (e.g. orientation in the operating theatre, developing empathy, difficult consultations, coping with stress) can inform the pedagogic scenarios to be investigated.

References:
The Great Barrier Debrief: Using 360 Degree Video to Enhance Simulation Debrief
S Perry, G Dixon, J Barnes, A Pereira, M Natarajan

Background
Debriefing after simulation is arguably the most important aspect of simulation training, allowing students to make sense of the simulation experience and carry this learning forward (1-3). Training simulation providers to debrief effectively is key to enhancing meaningful debrief for students and trainees alike, and yet this is poorly done. It is known that there are many ways to debrief students after simulation, and several established methods (4). We designed a study to investigate whether the use of an innovative 360 degree camera could help improve the debriefing skills of tutors.

Methodology
The initial phase of this project will take place in January 2019, obtaining feedback from students on their experience of debriefing following simulation. Students and tutors will be invited to have debriefing sessions filmed using a 360 degree camera allowing simultaneous analysis of all participants. A period of training of Clinical Teaching Fellows (CTF) will take place in February 2019. This will involve using the 360 degree footage for analysis, alongside using the PEARLS model for debriefing (5). Training will focus on debriefing with ‘good judgement’ as described by Rudolph et al. (6). Use of the 360 degree camera will allow us to look at different aspects of the debrief, including body language and verbal responses from both students and debriefer. Ethical approval for filming students and has been obtained. The third phase will involve gaining feedback from the same cohort of students following our training intervention, and analysing further sessions using the 360 degree camera.

Results
A survey of the past and present CTFs and Clinical Innovation Fellows at The Great Western Hospital (GWH) Academy, directly responsible for providing and debriefing simulation in the Academy, showed that only 52.6% felt adequately trained to provide debrief following simulation, despite it being an integrated part of their job. Results on student feedback will be available end of March 2019. The results obtained from the analysis of debriefing sessions using the 360 degree camera will be reported. We hope to show that student perception of quality and usefulness of debriefing sessions following simulation will significantly improve following our training intervention. Furthermore we hope to improve pre-defined objective measures of student interaction during debriefing.

Discussion
Training those who provide debriefing for medical students following simulation is important to enhance the quality of debriefing, as well as the experience and learning of students. We believe that using a 360 degree camera to enhance debriefing training, as well as a uniform debrief model, will significantly improve the quality of simulation debrief for undergraduate medical students at GWH Academy. If successful, this model will be rolled out to all those providing simulation at GWH, including postgraduate trainers.

References
(2) Shinnick MA, Woo M, Horwich TB & Steadman R. Debriefing: The most important component in simulation? Clinical Simulation in Nursing. 2011 May; 7(3): e105-e111
Simulation in a district general hospital: a six-month evaluation shows the juice is worth the squeeze
L Baxter, S Panter, M Jachuck

Background:
South Tyneside District Hospital had an underutilised simulation facility. Patient safety initiatives, Shape of training and the subsequent development of the Internal Medicine curriculum demonstrated that expansion of our simulation offering was necessary. Aims were established by the team in April 2018:

- To raise the profile of simulation
- Faculty development
- Develop a simulation training programme for Foundation and Core medical trainees (CMTs) in line with their curriculum.
- Utilise simulation to support CMTs transition to being medical registrar.
- Promote multidisciplinary simulation to improve patient care.

Methodology:
Roles were agreed:

Simulation Fellow:
- Develop sessions for trainees in line with curricula, including writing of scenarios, establishing learning outcomes and timetabling sessions in order to minimise impact on clinical duties.
- Liaise with local Training Programme Tutors to integrate simulation into the professional learning programmes.
- Attend Clinical Incident Review Group to identify where multidisciplinary simulation could be used to improve patient experience and care.
- Work with clinical teams to develop multidisciplinary simulation.
- Promote and support junior doctor involvement in delivering simulation to aid juniors’ personal development.

Simulation Lead:
- Promote and support senior clinicians in delivering simulation to develop a permanent skilled faculty, including arranging faculty development training.
- Attend regional and national meetings and feedback on developments in simulation and training curriculum requirements.
- Support the simulation fellow in their role and ensuring their clinical, educational, leadership and management development requirements are met. Deputy Director of Medical Education:
- Support and represent the simulation team when applying for funding.
- Promote and support the inclusion of non-medical staff in the faculty.
- Assist with balancing faculty clinical work with delivery of simulation.

Whole team:
- Participate in faculty training.
- Collaborate with other centres in the region.
- Promote attendance at simulation training within the trust.
- Deliver simulation.

Results:
At six months, 100 multidisciplinary healthcare professionals have attended simulation training. Feedback has been universally positive (80.82% rating sessions as excellent, 19.18% as good). All foundation trainees have received a half-day simulation session on acute scenarios. CMTs have all been offered a full day emergency presentations simulation. Both training sessions are aligned with curriculum outcomes. All reported a significant increase in confidence and ability post simulation. Areas identified for multidisciplinary simulation were falls prevention and communication in difficult scenarios: capacity, end of life, DNACPR and complaints. Sessions were piloted and the
falls prevention simulation resulted in significant culture change. The communication simulation was well received. 26 clinical staff have attended a simulation faculty development day. A Foundation Champion role has been established; currently 10 Foundation Champions work supporting the faculty and completing quality improvement projects within simulation. These champions will recruit and support the next cohort. 95% of all attendees across the different sessions reported they would make changes to their practice as a result of the session.

Discussion:
Investment in a simulation fellow and faculty has had a significant impact on simulation delivery which consequentially translated into perceived patient safety benefits. Scheduled for the next six months are further sessions including non-technical skills focused training days; for Foundation trainees on death, dying and decision making aligned with the curriculum, for CMTs designed to cover skills required as the medical registrar. There will also be further multidisciplinary simulation; a second communication day and development of in situ simulation for acute scenarios.

Mini Poster: ASM-TEL1
Can virtual reality clinical scenarios improve medical students’ clinical learning?

T Bird, N Mahmood, V Rodwell, F Surti, J Sturgeon, A Dharmaratnam, E Tamlyn, Z Shahid, M Judge, J Shoker

Background:
Virtual reality (VR) offers new opportunities for vicarious and immersive learning which are seen as engaging and helpful for early-year Medical students just becoming acquainted with clinical situations (1). Using virtual reality video in the first person point of view, virtually experiencing encounters with patients, diagnostic discussion, interruptions, sounds, and all the pressures that occur in clinic before actually going into the clinic, should provide richer and more effective learning than traditional methods of simply reading or being told about clinical cases (2). In addition, VR-enriched learning may help medical students to empathise more with patients (3). As part of University of Leicester Digital Innovation Partnering in 2018, Leicester Medical School staff and students created 360-degree ward round films, and tested to find if watching these films helped students to feel more confident for the ward, improved documentation accuracy, and encouraged their empathy toward patients. Using the findings of this study, workshops (to run spring 2019) were arranged to help students use and learn from the films as they prepare to enter clinical study. This project shares findings from both the study and the workshops.

Methodology:
Study: Using a mixed-method research methodology, second-year student volunteers (N=8) were exposed to either a traditional PowerPoint presentation, the VR ward round first-person video created by the GoPro Omni 360deg camera (viewed on Google cardboard-type devices), or no prior teaching. Student participants’ documentation accuracy was then assessed during a subsequent real-world ward round simulation. Reflections on performance, and thus the learning medium was measured via pre- and post-intervention questionnaires and discussion. Workshops: Implementing the findings from this study and with input from other clinical-level students, workshops were run beginning with year 2 students (N=45), to widely roll out the use of the now-improved 360deg ward round video. Workshops included discussion and feedback to ascertain students’ learning and improvement in confidence, documentation, and empathy.

Results:
Data from the pre- and post-intervention questionnaires in the study showed 100% of the VR students reported improvement in confidence of understanding the ward round before going on it, and 75% found the VR instruction engaging, while PowerPoint learners reported 50% and 0% respectively. There was no difference in documentation accuracy, indicating an opportunity to improve before rolling out the intervention more widely. After the 30-minute teaching session, 100% of VR students felt sufficiently prepared for the real-life simulation. Additionally, 75% found VR ‘promoted’ their empathy for the patients and relatives. Data from questionnaires and discussion at the workshops will be collected spring 2019, and are expected to be similar but with a clearer improvement in documentation accuracy and empathy.

Discussion:
Learning in VR in this method was seen by students as transformative, and by the institution as affordable and sustainable. VR has impact as a more engaging, confidence-boosting way of vicariously experiencing the clinical environment before entering it, and helps fill a learning gap experienced by students just beginning clinical study. VR potentially encourages empathy as well as accuracy in documentation accuracy. Overall, this technology holds further promise to transform medical teaching in other teaching areas.

References:

Mini Poster: ASM-TEL3
Enhancing Vascular Examinations with the Use of Virtual Reality Fully Immersive Technology teaching
CL Bee, L Hainsworth, I Hunter

Background:
Vascular surgery is an area within the medical curriculum which students often have limited and highly variable exposure. The Royal College of Surgeons of England highlight within the national undergraduate curriculum for surgery the importance for all medical students to be able to understand the investigations to determine the ‘presence and severity of peripheral vascular disease’, an important aspect of which is performing and interpreting an ankle brachial pressure index (ABPI)\(^1\). In light of this we have developed an innovative teaching technique to promote learning of the vascular curriculum, Virtual Reality Fully Immersive Technology Teaching (VR FITT). Ongoing technological advancements have allowed smartphones to be used as virtual reality headsets. Combining this with progress made in filming with HD 360 cameras we have been able to create a high fidelity virtual reality teaching video. To enhance the learning experience these videos are overlaid with a wealth of hot spots, interactive points and questions allowing the learner to interact with their environment. These videos are accessed via a smartphone app allowing students to access resources at a time convenient to them. We have therefore developed a simulation scenario detailing the performance and interpretation of ABPI. The aim of this educational research is to compare the performance of undergraduate medical students in undertaking ankle brachial pressure index measurements in those undergoing traditional teach

Methodology:
Undergraduate medical students on their third year clinical rotation were offered the option to participate in the study. A pre-teaching assessment on how to perform an ABPI and its interpretation was given to all participants to assess their baseline knowledge. Students were then given an initial teaching session on how to perform and interpret an ABPI followed by a post-teaching assessment. Students were then randomly allocated to the VR FITT or traditional teaching (1 week of attachment to the vascular team within a 9 week surgical rotation) using random number generation. Students with the VR FITT were monitored to assess their frequency of use and were told to use VR FITT at their own discretion. A 6 week follow up knowledge assessment and assessment of ABPI technique will be conducted to assess knowledge retention of all students.

Results:
All students will have their initial pre and post intervention results analysed to assess the effectiveness of the teaching intervention they underwent. We will then perform a comparative analysis between the traditional and VR FITT groups to assess skill and knowledge fade. Finally using the apps technology we will assess the students level of interaction with VR FITT and whether this correlates to their skill and knowledge retention.

Discussion:
We expect that giving the opportunity to use VR FITT will help prevent skill and knowledge fade in a practical procedure where students do not have readily available access to the equipment vs VR FITT.

References:

Mini Poster: ASM-TEL2
Pod-casting the Light on Technology in Medical Education
L Webb, L Ting, K Jones

Background:
Information technology and technology-enhanced learning (TEL) have gained importance in medical education over the past twenty years, from online learning environments to the more recent interest in immersive virtual reality[1,2]. It is likely that interest in TEL will continue and increase due to constant exposure during students’ lives and an associated higher prevalence of technological skills[3], as well as its potential for cost-savings[4]. Podcasts are a form of downloadable audio tracks that are available on a range of platforms which can be used in education. Research has identified a high awareness but low use of podcasts throughout undergraduate and postgraduate medical education, with some barriers including personal preference, lack of training in their utilisation, and perceived quality of resources[5]. The University of Bristol has over 1300 students studying Medicine across its academies including those based at the Great Western Hospital in Swindon[6]. We aim to produce a series of podcasts on relevant topics within the undergraduate curriculum for use by those based in Swindon, with the potential to expand it to all medical students at Bristol University.

Methodology:
Initial verbal discussion with third-year medical students of the University of Bristol was promising and has revealed that they are interested in the possibility of podcasts for revision, proposing that they will mostly listen to them while traveling or performing other daily tasks. This was considered when designing the tracks. In order to overcome some of the previously stated barriers, podcasts were designed and created based on their medical school curriculum as optional study aides following tutorials, using journal articles and attendance at a conference workshop to guide their design[7,8]. To date, a podcast on ischaemic stroke has been created with more planned including diabetes, the management of diabetes and Parkinson’s disease. We intend to upload this to SoundCloud to allow students to listen for free and download the podcasts if they wish. The podcasts will be evaluated by using an online survey. The survey utilises 5-point Likert scales with multiple free-text boxes to evaluate when and how many times they listen to the podcasts, how well the podcasts address the intended aims and objectives, the students’ self-ratings of their knowledge before and after the podcast, as well as what they perceive as useful about the podcasts and what requires improvement. Likert scales will be analysed using nonparametric testing for significance, and thematic analyses will be performed on free text boxes. Finally, statistics will be analysed using the SoundCloud website regarding the number of view plays, likes, comments and downloads, as well as the number of separate listeners.

Results:
Awaited.

Discussion:
Results of the surveys and their analysis are awaited for discussion.

References:
The impact of ‘pause and debrief’ simulation training on acquisition of knowledge in pre-clinical medical education.
B Rybinski, C Kocialkowski, K Mincher, H Lewis, I Hunter, R Bamford

Background:
Debriefing is an essential element of effective simulation training with a number of models available. Simulation training is integral to many medical education curriculums and it is paramount to maximise its potential. Our aim was to examine whether a “pause and debrief” compared with a traditional debrief method in simulation training would improve performance in second year medical students without any prior clinical exposure.

Methodology:
Medical students were randomly allocated to two simulation groups. Group 1 received an initial assessment scenario and two traditional simulation sessions where debriefing takes place following a completion of a whole scenario. During the scenario participants who are not actively taking part are given a task of observing the role play to provide additional feedback during debriefing. Group 2 received the same scenarios where debrief occurred during the simulation. Following this “pause” the participant was replaced with one of the observers who would start the scenario from the beginning. Following the three sessions all students were assessed by completing a final, fourth scenario. All scenarios focused on ABCDE patient assessment. Pre-test and post-test assessed the student’s knowledge of the management of a myocardial infarction. The remaining two sessions centred around the topic of hypoglycaemia and anaphylaxis. Their progress was recorded using the simulation suite’s inbuilt video recording equipment to be later marked by a blinded assessor using a modified TRACS tool.

Results:
There were 7 participants in both groups. However, due to personal circumstances 1 participant in group 2 could not attend the final session and was excluded from the study. Mean scores for group 1 were 18.3 pre- and 21.8 post- intervention, whilst group 2 were 14.1 and 21.1 respectively. Results were analysed using an unpaired t-test. There was a statistically significant (p = 0.0168) percentage difference in performance in the intervention group suggesting that a “pause and debrief” method had a positive impact on student learning.

Discussion:
“Pause and debrief” is an effective debrief model for simulation training in novices with the potential to improve the performance of students. As such it has an important place in medical education.

References:

Mini Poster: ASM-TEL9