Annual Scientific Meeting
2016 Abstract Book

50 years of Medical Education: 
*Historical perspectives, future directions.*

5\textsuperscript{th} - 8\textsuperscript{th} July
The Waterfront, Belfast
ASME would like to thank Speedwell for being the main sponsor of the ASM 2016.
**Presentations Index**

**ASME Grants & Awards**

<table>
<thead>
<tr>
<th>Paper Title</th>
<th>Authors</th>
<th>Date</th>
<th>Time</th>
<th>Room</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Clinical Teacher Traveling Fellowship 2016: The Wicked Problem of curriculum reform in undergraduate medical education – insights from travelling fellowship to Canada</td>
<td>L Hawick, J Cleland, S Kitto</td>
<td>Wednesday</td>
<td>3.10-3.30pm</td>
<td>Main Auditorium</td>
<td>16</td>
</tr>
<tr>
<td>Medical Education Travelling Fellowship 2016: “Help, I’m out of control!”. Students’ emotional and behavioural responses to complexity.</td>
<td>E Hel mich, L Diachun, R Joseph, K La Donna, N Poel, L Lingard, S Cristancho</td>
<td>Wednesday</td>
<td>3.30-3.50pm</td>
<td>Main Auditorium</td>
<td>17</td>
</tr>
<tr>
<td>New Leaders Award 2016: An Innovative Look at Inter-professional Learning</td>
<td>S Nagraj</td>
<td>Wednesday</td>
<td>4.10-4.30pm</td>
<td>Main Auditorium</td>
<td>19</td>
</tr>
<tr>
<td>ASME/GMC Joint Excellent Medical Education Award 2015: CPD category: Authentic undergraduate placements in GP: a recruiting force for generalists? A realist evaluation of how the undergraduate learning environment influences career choices</td>
<td>J Lefroy, R McKinley, R Kinston, S Gay, S McBain, S Yardley</td>
<td>Wednesday</td>
<td>4.30-4.50pm</td>
<td>Main Auditorium</td>
<td>20</td>
</tr>
</tbody>
</table>

**ASME Best Original Research Paper Award Finalists 2016**

| The road to general practice: constructing professional identity in GP training | J Johnston, M Donnelly, G Gormley | Thursday   | 4.00-4.30pm | Bar 2           | 22   |
| Behind the scenes: an exploration of roles and relationships in the OSCE triad | G Gormley, M Corrigan, K Cullen, JL Johnson | Thursday   | 4.30-5.00pm | Bar 2           | 24   |

**Basic Science/ Biomedical Teaching & Assessment**

| Improving Trainee Engagement with the Higher Surgical Training Program through establishment of a Trainee Board | K Keogh, R Bamford, P Boorman, R Longman | Friday     | 10.00-10.20am | Meeting Room 3b | 28   |
| Timing of assessment and engagement with clinical experiences during Obstetric & Gynaecological 4th Year Medical Student Placement | J Gomersall, I Cooke, J Costa | Friday     | 10.20-10.40am | Meeting Room 3b | 29   |
Clinical Skills

Acute care simulation: Does mental workload correlate with scenario workload and performance in third year medical students?
M Hollifield
S Tolchard
J Morgan
Friday
8th July
9.00-9.20am
Meeting Room 3b
31

Pharmacist-led feedback workshops increase appropriate prescribing of antimicrobials
L McLellan
Friday
8th July
9.20-9.40am
Meeting Room 3b
32

Communication Skills

A Realist Review of what works for whom, how, and why for pharmacists to develop interpersonal pharmacist-patient communication?
A Kerr
J Strawbridge
C Kelleher
J Burns
P Pype
F Mertens
M Deveugele
T Pawlikowska
Wednesday
6th July
4.30-4.50pm
Meeting Room 3b
34

Continuing Professional Development

Enhancing the impact of education and training with action planning and coping planning
J Hart
L Byre-Davis
Friday
8th July
9.20-9.40am
Meeting Room 2b
37

Exploring the impact of mentoring and buddying for undergraduate medical students: The MEntoring medical students to Navigate Transitions and Optimise Resilience (MENTOR) Study
H Andrews
G French
R Patel
Friday
8th July
9.40-10.00am
Meeting Room 2b
38

How does learning transfer to practice to improve patient safety, clinical effectiveness and the patient's experience?
J Illing
J McLahlan
H Hessellgreaves
P Crampton
P Tiffin
G Finn
S Corbett
M Sawdon
M Swany
A Kehoe
Friday
8th July
10.00-10.20am
Meeting Room 2b
39

T-REx, TED, DOTS and MSF: novel workplace-based assessments for a clinical teaching fellow e-portfolio.
J Hawkins
C Earnshaw
Z Hossenbaccus
YYS Ho
M Sherwood
Z Dawood
P Davies
CD Rodd
Friday
8th July
10.20-10.40am
Meeting Room 2b
40

Curriculum Planning

Which teaching methodology best facilitates acquisition of competence in pre-operative assessment for medical undergraduates? A randomised control trial.
V Medland
S Canning
K Manley
Friday
8th July
9.40-10.00am
Meeting Room 3b
42
### E-Learning

The impact of e-Learning on Clinical Skills

- **A Courtney**
- **A Kerry**
- **Friday**
- **8th July**
- **9.00-9.20am**
- **Meeting Room 2b**

#### Faculty Development

Developing a structured teaching skills certification programme to recognise the involvement of junior doctors in undergraduate education

- **S Tilson**
- **C Carus**
- **L Wells**
- **Friday**
- **8th July**
- **9.00-9.20am**
- **Board Room 2**

Educational development in context: Developing a regional community of practice in psychiatry

- **J Shaw**
- **M Moffat**
- **I Cameron**
- **D Bennett**
- **Friday**
- **8th July**
- **9.20-9.40am**
- **Board Room 2**

Feeling valued? A study to explore the factors that influence GP teachers’ sense of value.

- **R Henniker-Major**
- **E Metters**
- **S Kumar**
- **B Broglio**
- **A Newth**
- **Friday**
- **8th July**
- **9.40-10.00am**
- **Board Room 2**

How can we turn enthusiasm into action? Motivating our army of educators!

- **E Hampton**
- **A Gadd**
- **E Carr**
- **K Hainey**
- **H Monaghan**
- **Friday**
- **8th July**
- **10.00-10.20am**
- **Board Room 2**

Improving differences in achievement in medical students: insights from the literature

- **P Vivekananda-Schmidt**
- **J Sandars**
- **Friday**
- **8th July**
- **10.20-10.40am**
- **Board Room 2**

### Inter-Professional Education

Dare to NHS: Widening Participation into Healthcare through Simulation

- **R Holman**
- **A Woodman**
- **M Natarajan**
- **K Jones**
- **S Canning**
- **Wednesday**
- **6th July**
- **3.10-3.30pm**
- **Board Room 2**

End of life care simulation for a multi-disciplinary undergraduate team

- **YYS Ho**
- **D Morton**
- **H Chant**
- **N Oxlade**
- **L Crossland**
- **C Earnshaw**
- **Z Hossenbaccus**
- **J Hawkins**
- **CD Rodd**
- **Wednesday**
- **6th July**
- **3.30-3.50pm**
- **Board Room 2**

Improving awareness of the management of issues within women’s health

- **K Else**
- **J Moffatt**
- **K Jones**
- **Wednesday**
- **6th July**
- **3.50-4.10pm**
- **Board Room 2**

Introduction of an educational program for care home workers

- **L Jeyalingam**
- **S Perera**
- **J Williams**
- **C Etherington**
- **C Wills**
- **C Szasz**
- **Wednesday**
- **6th July**
- **4.10-4.30pm**
- **Board Room 2**

Making a difference: a qualitative study of an inter-professional social engagement project

- **RG Ayres**
- **RA Carter**
- **SAG Stevens**
- **Wednesday**
- **6th July**
- **4.30-4.50pm**
- **Board Room 2**
Paramedic and medical student simulation: An example of multidisciplinary debrief
JE Hambidge
JA McDonald
KA Else
A Woodman
Wednesday
6th July
4.50-5.10pm
Board Room 2

Patient Voice

‘Going the extra mile’. Critical discourse analysis of the power of patients and doctors
C Ho
S Roy
T Dornan
Wednesday
6th July
3.30-3.50pm
Bar 2

Doctors’ and Patients’ Differing Perspectives of Early Patient Contact
M Corr
G Rouston
R McCullagh
K McGlade
Wednesday
6th July
3.50-4.10pm
Bar 2

Inpatients’ experience of medical education: a blessing or a burden?
J Hollamby
J Morgan
Wednesday
6th July
4.10-4.30pm
Bar 2

The Attitudes of Medical Students to Feedback from Patients
CMS Pye
D Hunukumbure
S Das
Wednesday
6th July
4.30-4.50pm
Bar 2

What does it mean to be caring? Scoping literature review
H Gillespie
M Kelly
S Duggan
H Ganshorn
GJ Gormey
T Dornan
Wednesday
6th July
4.50-5.10pm
Bar 2

Postgraduate Education

A programme for overseas doctors: A realist evaluation
A Kehoe
J Illing
J McLachlan
S Forrest
J Metcalf
Wednesday
6th July
3.10-3.30pm
Meeting Room 3a

A Troubling Transition: What factors influence Core Medical Trainees when applying for Acute Registrar Training?
L Steele
M Holdway
P Fletcher
Wednesday
6th July
3.30-3.50pm
Meeting Room 3a

Accommodating changing career intentions in training pathways - more flexibility needed?
P Kavanagh
S O’Hare
Wednesday
6th July
3.50-4.10pm
Meeting Room 3a

An Evaluation of an Education Intervention that Employs the use of Patients to Teach Values and Behaviours to Junior Doctors
K Best
F Prootts
R Aspinall
S Redwood
Wednesday
6th July
4.10-4.30pm
Meeting Room 3a

Assessing the Impact of Implementing a 7 day Working Pattern on the Learning Opportunities and Wellbeing of Trainee Doctors
E Hampton
J Tiernan
S Edgar
Wednesday
6th July
4.30-4.50pm
Meeting Room 3a

Clinical Handover: from theory into practice. A novel simulation-based handover training day.
C Hogan
I Pankhania
J Siah
A Khaku
C Curti
P Walker
E Smithers
K Amin
P Rammana
A Choudhury
Wednesday
6th July
4.50-5.10pm
Meeting Room 3a

Clinical Learning Environments for Postgraduate Medical Education: A Realist Synthesis.
A Wiese
C Kilty
D Bennett
Thursday
7th July
3.50-4.10pm
Meeting Room 3a
<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
<th>Date</th>
<th>Time</th>
<th>Room</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Surgical Training Bootcamps – the Gold Standard for Surgical Induction Programmes?</td>
<td>R Bamford, I Langdon, CD Rodd, S Eastaugh-Waring, J Coulston</td>
<td>Thursday 7th July</td>
<td>4.50-5.10pm</td>
<td>Meeting Room 3a</td>
<td>72</td>
</tr>
<tr>
<td>Cross Specialty, Simulation Based Basic Endovascular Skills Training (SBT): An effective model for improving trainees’ confidence and interest, and enhancing patient safety</td>
<td>P Leighton, C Nesbitt, S Mafield</td>
<td>Thursday 7th July</td>
<td>4.10-4.30pm</td>
<td>Meeting Room 3a</td>
<td>73</td>
</tr>
<tr>
<td>Developing a validated simulation programme for Core and Higher surgical trainees in Non-operative technical surgical skills (NOTSS)</td>
<td>A Humphreys, R Bamford, J Coulston</td>
<td>Thursday 7th July</td>
<td>4.30-4.50pm</td>
<td>Meeting Room 3a</td>
<td>74</td>
</tr>
<tr>
<td>Exploring the development of professional identity in renal physicians</td>
<td>H Beckwith, M Kingsbury, J Horsburgh</td>
<td>Friday 8th July</td>
<td>9.00-9.20am</td>
<td>Meeting Room 3a</td>
<td>75</td>
</tr>
<tr>
<td>Exploring the factors that impact on the success of students from widening participation backgrounds</td>
<td>S Nicholson, K Piper, O Westwood, M Rezaian</td>
<td>Friday 8th July</td>
<td>9.20-9.40am</td>
<td>Meeting Room 3a</td>
<td>76</td>
</tr>
<tr>
<td>Foundation Year 2 doctors’ reasons for leaving UK medicine: an in-depth analysis of decision-making</td>
<td>SE Smith, VR Tallentire, A Laidlaw, L Pope, J Morrison</td>
<td>Friday 8th July</td>
<td>9.40-10.00am</td>
<td>Meeting Room 3a</td>
<td>77</td>
</tr>
<tr>
<td>How can we measure the quality of the learning environment in obstetrics? Development and piloting of a novel interaction map tool</td>
<td>B Beska, A Williamson, M Smith, L Redmond, J Hanley</td>
<td>Friday 8th July</td>
<td>10.00-10.20am</td>
<td>Meeting Room 3a</td>
<td>78</td>
</tr>
<tr>
<td>Implementation and evaluation of peer assessment for postgraduate taught students</td>
<td>K Edwards, C Tomas</td>
<td>Friday 8th July</td>
<td>10.20-10.40am</td>
<td>Meeting Room 3a</td>
<td>79</td>
</tr>
<tr>
<td>Implications of aligning full registration with graduation from medical school</td>
<td>K Mattick, K Kaufhold, N Kelly, J Cole, G Schettler, C Rees, A Bullock, G Gormley, L Monrouxe</td>
<td>Wednesday 6th July</td>
<td>3.10-3.30pm</td>
<td>Meeting Room 3b</td>
<td>80</td>
</tr>
<tr>
<td>In at the Shallow End: The effect of peer-mentoring on transition to general medical registrar training</td>
<td>M Holdway, LP Steele, P Fletcher</td>
<td>Wednesday 6th July</td>
<td>3.30-3.50pm</td>
<td>Meeting Room 3b</td>
<td>81</td>
</tr>
<tr>
<td>Mapping Clinical Learning Environments for Postgraduate Medical Education and Training: A Multi-stakeholder Perspective</td>
<td>C Kilty, A Wiese, S Stoyanov, D Bennett</td>
<td>Wednesday 6th July</td>
<td>3.50-4.10pm</td>
<td>Meeting Room 3b</td>
<td>82</td>
</tr>
<tr>
<td>Qualification Inflation: Analysis of Changes in Frequencies of Additional Qualifications among UK and Irish Consultant Plastic Surgeons</td>
<td>F Ti, CP O’Boyle</td>
<td>Wednesday 6th July</td>
<td>4.10-4.30pm</td>
<td>Meeting Room 3b</td>
<td>83</td>
</tr>
<tr>
<td>Sir Lancelot Who? Simulated Ward Rounds are an Effective Tool to Develop Non-Technical Skills to Lead and Participate in a Useful Ward Round</td>
<td>R Bamford, P Orchard, S Williams, C Rowlands, R Longman, P Boorman, D Pinder, J Coulston</td>
<td>Thursday 7th July</td>
<td>3.50-4.10pm</td>
<td>Meeting Room 3b</td>
<td>84</td>
</tr>
</tbody>
</table>
The experiences of doctors across the trainee-trained doctor transition: a longitudinal audio-diary study

L Gordon  
D Jindal-Snape  
J Morrison  
G needham  
S Siebert  
C Rees  
Thursday  
7th July  
4.10-  
4.30pm  
Meeting Room  
3b  
85

Trainee doctors’ identities: the influence of workplace environment and socio-political context.

D Bennett  
M Horgan  
C Bergin  
T Dornan  
Thursday  
7th July  
4.30-  
4.50pm  
Meeting Room  
3b  
86

What can we learn from remote supervision about the ‘apprenticeship model’ of medical education?

S Wearn  
T Dornan  
PW Teunissen  
T Skinner  
Thursday  
7th July  
4.50-  
5.10pm  
Meeting Room  
3b  
87

Practice Based Teaching And Learning

Cost, Value and Quality in Professional Learning: promoting economic literacy in medical and teacher education.

V Baumfield  
K Mattick  
Friday  
8th July  
9.00-  
9.20am  
Bar 2  
89

Critical Incidents - we know a lot but learn little

P Johnston  
Friday  
8th July  
9.20-  
9.40am  
Bar 2  
90

How nurses support medical student transition to junior doctor and ensure their safe clinical practice

R Samuriwo  
A Bullock  
L Monrouxe  
K Webb  
Friday  
8th July  
9.40-  
10.00am  
Bar 2  
91

Improving departmental induction through peer-led teaching

S Holmes  
A Cooper  
G Dark  
Friday  
8th July  
10.00-  
10.20am  
Bar 2  
92

Using group discussion with Year 1 MBBS students to improve the quality and quantity of their feedback for their clinical placement tutors

M Hayfron-Benjamin  
C Mackay  
S Haji  
O Ashaju  
E Duncan  
M Kyriakides  
Friday  
8th July  
10.20-  
10.40am  
Bar 2  
93

Professionalism

Are some doctors more complaint or discipline prone than others? A review of complaints received by the Medical Council (Ireland) 2008-2012.

P Kavanagh  
S O'Hare  
Wednesday  
6th July  
3.10-  
3.30pm  
Meeting Room  
2b  
95

Cluster projects: community engagement projects developing leadership and teamworking skills in final year medical students.

P Coventry  
H Clifford  
H Derbyshire  
RK McKinley  
A Panesar  
S Simpson  
S Thirlwall  
Wednesday  
6th July  
3.30-  
3.50pm  
Meeting Room  
2b  
96

Developing a sense of professionalism in widening access students

S Curtis  
J Rowland  
Wednesday  
6th July  
3.50-  
4.10pm  
Meeting Room  
2b  
97

Experiences of integration of widening access students and graduates into medical school and the medical profession, respectively.

J White  
S Curtis  
Wednesday  
6th July  
4.10-  
4.30pm  
Meeting Room  
2b  
98

Learning To Care Whilst Learning To Cure - Creating A System To Optimise The Employment Of Medical Students As NHS Clinical Support Workers

S Meldrum  
Wednesday  
6th July  
4.30-  
4.50pm  
Meeting Room  
2b  
99
<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
<th>Date</th>
<th>Time</th>
<th>Room</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Networking as a Career Tool for Students - Is there a Gender Difference?</td>
<td>M Hochleitner, H Siller, G Tauber, A Bader</td>
<td>Wednesday</td>
<td>4.50-5.10pm</td>
<td>Meeting Room 2b</td>
<td>100</td>
</tr>
<tr>
<td>Preparation for Treating Life Limiting Illness – Beyond Palliative Medicine</td>
<td>S Qureshi</td>
<td>Thursday</td>
<td>3.50-4.10pm</td>
<td>Meeting Room 2b</td>
<td>101</td>
</tr>
<tr>
<td>The Students’ Story: A Narrative Exploration of Medical Student Identities</td>
<td>M Corrigan, JL Johnston, C Thomson, K McClade</td>
<td>Thursday</td>
<td>4.10-4.30pm</td>
<td>Meeting Room 2b</td>
<td>102</td>
</tr>
<tr>
<td>What guides the decision making of clinicians assessing medical students for professionalism on clinical placements?</td>
<td>J Harris</td>
<td>Thursday</td>
<td>4.30-4.50pm</td>
<td>Meeting Room 2b</td>
<td>103</td>
</tr>
<tr>
<td>What makes a good Clinical Teaching Fellow?</td>
<td>C Earnshaw, CD Rodd</td>
<td>Thursday</td>
<td>4.50-5.10pm</td>
<td>Meeting Room 2b</td>
<td>104</td>
</tr>
<tr>
<td><strong>Selection</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>“It’s making contacts”: Notions of social capital and their implications for medical selection and education</td>
<td>J Cleland, S Nicholson</td>
<td>Thursday</td>
<td>3.50-4.10pm</td>
<td>Board Room 3</td>
<td>106</td>
</tr>
<tr>
<td>A cohort study analysing medical school performance of students from a widening participation programme.</td>
<td>J Azmy, K Nessa, A Vaughan, A Freemont, D Nimmons</td>
<td>Thursday</td>
<td>4.10-4.30pm</td>
<td>Board Room 3</td>
<td>107</td>
</tr>
<tr>
<td>Differences in perceived stress and coping strategies of high-school and graduate-entry students: an exploratory study in Portugal</td>
<td>F Guimaraes, A Araujo, M Costa</td>
<td>Thursday</td>
<td>4.30-4.50pm</td>
<td>Board Room 3</td>
<td>108</td>
</tr>
<tr>
<td>Selecting medical students for resilience</td>
<td>LI Lam, G Pinner</td>
<td>Thursday</td>
<td>4.50-5.10pm</td>
<td>Board Room 3</td>
<td>109</td>
</tr>
<tr>
<td>Six minds are better than one: use of action learning sets to help with planning projects</td>
<td>F Tasker, J Fukuta, R Roonery, I Taylor, M Hollifield, J Hollamby, J Morgan</td>
<td>Friday</td>
<td>9.00-9.20am</td>
<td>Board Room 3</td>
<td>110</td>
</tr>
<tr>
<td>The introduction and evaluation of an empathy specific entrance test for medical school</td>
<td>MJ Platt, C Salter, G Pounds, P Bryant</td>
<td>Friday</td>
<td>9.20-9.40am</td>
<td>Board Room 3</td>
<td>111</td>
</tr>
<tr>
<td>Use of the Competitive State Anxiety Inventory-2 (CSAI-2) Tool to Examine the Relationship of Anxiety and Performance in Multiple Mini-Interviews for Applicants to Dundee Medical School</td>
<td>K McConville</td>
<td>Friday</td>
<td>9.40-10.00am</td>
<td>Board Room 3</td>
<td>112</td>
</tr>
<tr>
<td>Values-Based Recruitment for Nurses and Midwives: Are MMIs the Solution?</td>
<td>M Traynor, M Galanouli, M Roberts, T Gale</td>
<td>Friday</td>
<td>10.00-10.20AM</td>
<td>Board Room 3</td>
<td>113</td>
</tr>
</tbody>
</table>
## Teaching About Specific Subjects

**Supporting Out of Program Trainees: establishing a ‘Return to Acute Paediatrics’ course in Northern Ireland**

N Kirk  
L Thompson  
N McCay  

Friday  
8th July  
10.00-10.20am  
Meeting Room 2a

**Teaching and consolidating prescribing skills for final year medical students: a community based workshop approach.**

A Panesar  
D Blanchard  

Friday  
8th July  
10.20-1040am  
Meeting Room 2a

## Teaching, Learning & Assessment On Clinical Rotations

**QR codes versus Augmented Reality for students starting clinical placement**

YYS Ho  
D Alder  
C Earnshaw  
Z Hossenbaccus  
J Hawkins  
H Ghant  
N Oxlade  
P Davies  
CD Rodd  

Thursday  
7th July  
3.50-4.10pm  
Board Room 2

**Real-Time Curriculum Mapping by Students as a means of Evaluating a Hospital-Based Clinical Attachment**

J Offer  
S Tilson  

Thursday  
7th July  
4.10-4.30pm  
Board Room 2

**Workplace empowerment in surgical training posts**

Z Oliphant  
E Papworth  
J Coulston  

Thursday  
7th July  
4.30-4.50pm  
Board Room 2

## Technology Enhanced Learning

**The Prompt Pilot Study: Qualitative analysis of an online intervention to promote physical activity in medical students**

C Neill  
K McGlade  
M Tully  

Wednesday  
6th July  
3.10-3.30pm  
Board Room 1

**‘#SixSecondStudying’: The use of the Vine application as a tool in medical education**

J Guckian  
J Spencer  
S Maitland  

Wednesday  
6th July  
3.30-3.50pm  
Board Room 1

**Google Apps for Education: the Abstracted Virtual Learning Environment (VLE) for Medical Education**

J Toomey  
K Brandom  
R O’Brien  

Wednesday  
6th July  
3.50-4.10pm  
Board Room 1

**Social Media, Technology, and Digital Professionalism: education and ethical implications of using social media in undergraduate medical education**

O Allam  
K Linkman  
S Oultram  
D Taylor  

Wednesday  
6th July  
4.10-4.30pm  
Board Room 1

**Using Video Feedback in Assessment – is it Fair, Feasible and Effective?**

H Knowles  
S Lovato  
C Anele  
A Jewtha  
J Shah  
A Southgate  
A Sharif  

Wednesday  
6th July  
4.30-4.50pm  
Board Room 1

**Ethical reasoning through simulation: A phenomenological analysis of student experiences**

G Lewis  
M McCullough  
AP Maxwell  
G Gormley  

Thursday  
7th July  
3.50-4.10pm  
Board Room 1
The Virtual Toddler: A comparison of blended learning using a virtual simulated patient, eLearning, and traditional didactic teaching of paediatric development to undergraduate medical students.

- E Keeling
- E Gunning
- S Mountjoy
- E Meinert
- T Bennie
- E Metters
- S Kumar

Thursday 7th July
4.10 - 4.30pm
Board Room 1
128

Engaging Observers: Can the use of an audience response system (TurningPoint®) in medical student simulation sessions improve observer engagement and learning?

- J Hawkins
- C Earnshaw
- Z Hossenbaccus
- YYS Ho
- CD Rodd

Thursday 7th July
4.30 - 4.50pm
Board Room 1
129

Multi-professional training through simulation – an undergraduate perspective

- S Bulford
- C Marshall
- C Kirkby
- I Cooke
- E Stevens

Thursday 7th July
4.50 - 5.10pm
Board Room 1
130

Saving Lives Through Skype: Remote Debriefing – a new paradigm for low resource hospitals in the Developing World?

- A Meaklim

Friday 8th July
9.00 - 9.20am
Board Room 1
131

Use of Digital Stories in Ageing and Health Medical Education Teaching: Nonagenarians tell us about Ageing Well.

- JA Grey
- IM Rea

Friday 8th July
9.20 - 9.40am
Board Room 1
132

Student-led Evaluation of Digital Storytelling to Support Experiential Learning

- G Petruso
- A Nnes
- RR Varghese
- A Codd
- B Burford
- GHS Vance
- NA Davidson

Friday 8th July
9.40 - 10.00am
Board Room 1
133

Gamification in medical education: Calculations App for medical students to prepare them for the Prescribing Skills Assessment.

- H Bassi

Friday 8th July
10.00 - 10.20am
Board Room 1
134

'Technology Contagion!' The combination of game and technology - does this enhance learning in undergraduate medical education?

- Z Hossenbaccus
- Z Dawood
- YYS Ho
- C Earnshaw
- J Hawkins
- CD Rodd

Friday 8th July
10.20 - 10.40am
Board Room 1
135

Undergraduate Medical Education – Assessment

An embedded real-time evaluation of student performance in problem based learning: with an exploration of the potential for an individualised assessment of performance

- C Greengrass

Wednesday 6th July
3.10 - 3.30pm
Board Room 3
137

An Evaluation of Medical Students' Responses to Structured Exam Feedback from Formative Assessment

- T Bird
- M Hamilton

Wednesday 6th July
3.30 - 3.50pm
Board Room 3
138

e-portfolio another tick box? Strategies for enhancing Medical student engagement

- A Andrews
- MP Parry

Wednesday 6th July
3.50 - 4.10pm
Board Room 3
139

Examining OSCEs: a metanarrative synthesis

- H Reid
- M Corrigan
- P McKeown
- T Doman

Wednesday 6th July
4.10 - 4.30pm
Board Room 3
140
### Undergraduate Medical Education - Teaching & Learning

#### OSCEs and the Fate of our Times. A critical review of published articles.
- **S Duggan**  
- **H Reid**  
- **T Dornan**  
- **Wednesday 6th July**  
- **4.30-4.50pm**  
- **Board Room 3**  

#### Assessment at UK medical schools varies substantially in volume, type and intensity and correlates with postgraduate attainment
- **A Harborne**  
- **OP Devine**  
- **IC McManus**  
- **Wednesday 6th July**  
- **4.50-5.10pm**  
- **Board Room 3**  

#### "Social Snakes and Ladders: The NHS Hospital Patient Flow Game" A novel board game to educate undergraduate medical students on barriers to patient flow within hospitals.
- **J Hawkins**  
- **Z Hossenbaccus**  
- **C Earnshaw**  
- **YYS Ho**  
- **CD Rodd**  
- **Wednesday 6th July**  
- **3.10-3.30pm**  
- **Meeting Room 1a**  

#### A Model for Medical Application Courses: Widening Access to Student Preparation
- **C Ratneswaran**  
- **J Mushtaq**  
- **C Reshekaron**  
- **J Steier**  
- **Wednesday 6th July**  
- **3.30-3.50pm**  
- **Meeting Room 1a**  

#### A student-centred approach to histopathology teaching: a mock breast multidisciplinary meeting.
- **R Holman**  
- **F Bold**  
- **K Billingham**  
- **F Maggiani**  
- **Wednesday 6th July**  
- **3.50-4.10pm**  
- **Meeting Room 1a**  

#### A study investigating the effect of dialogic feedback and self-regulation on surgical task performance, skill retention and learner experience of feedback
- **S Gill**  
- **F Harrold**  
- **S McAleer**  
- **R Ajawi**  
- **Wednesday 6th July**  
- **4.10-4.30pm**  
- **Meeting Room 1a**  

#### An evaluation of the effectiveness of BM6 Year 0 in preparing students for Year 1
- **B Leggett**  
- **S Curtis**  
- **Wednesday 6th July**  
- **4.30-4.50pm**  
- **Meeting Room 1a**  

#### An investigation into the value of PeerWise as an educational and development tool for medical students
- **E Fagan**  
- **C Guilding**  
- **M Atkinson**  
- **J Stewart**  
- **Wednesday 6th July**  
- **4.50-5.10pm**  
- **Meeting Room 1a**  

#### Bimanual vaginal examination: using innovation to standardise practise
- **O Mulki**  
- **I Plumptre**  
- **A Granadaos**  
- **F Bellow**  
- **Wednesday 6th July**  
- **3.10-3.30pm**  
- **Meeting Room 1b**  

#### Calling for help in clinical simulations: An examination of the latency and decision making processes of medical students
- **E Shapiro**  
- **B Burford**  
- **G Vance**  
- **Wednesday 6th July**  
- **3.30-3.50pm**  
- **Meeting Room 1b**  

#### Can simulated surgeries facilitate diagnostic reasoning in undergraduate medicine?
- **A Nagy**  
- **W Scott-Smith**  
- **G Ferns**  
- **Wednesday 6th July**  
- **3.50-4.10pm**  
- **Meeting Room 1b**  

#### Concepts maps are useful tools for representing clinical reasoning among third-year medical students
- **D De Oliveira**  
- **RS Pessoa**  
- **LL de Mmedeiros**  
- **APRM Falcao**  
- **MJP Vilar**  
- **RVZ Diniz**  
- **Wednesday 6th July**  
- **4.10-4.30pm**  
- **Meeting Room 1b**  

#### Contextualised data and Widening Participation in relation to Liverpool Medical School
- **N Ferrari**  
- **D stanistreet**  
- **J McNeill**  
- **F Watson**  
- **Wednesday 6th July**  
- **4.30-4.50pm**  
- **Meeting Room 1b**  

#### Defining Fidelity in Clinical Simulation: Refining a learner-centred framework
- **N Mordi**  
- **B Burford**  
- **R Thomson**  
- **G Vance**  
- **Wednesday 6th July**  
- **4.50-5.10pm**  
- **Meeting Room 1b**
**DermARTology: Can a dermatology art workshop improve undergraduate recognition of skin lesions?**

F Tasker
D de Berker
S Naarayan
J Morgan

Wednesday
6th July
3.10-3.30pm
Meeting Room 2a

**Developing, implementing and evaluating the effectiveness of an undergraduate Clinical Reasoning Curriculum**

S Khin-Htun
R Dennick

Wednesday
6th July
3.30-3.50pm
Meeting Room 2a

**Development of an online platform to promote undergraduate engagement in academic research projects: Describing the ProjectPal experience**

D Gill
A Rossiter
P Sivakumaran
G Mahir
R Lobo
TM Rawson

Wednesday
6th July
3.50-4.10pm
Meeting Room 2a

**Do we support students to ask ‘good’ questions in Problem Based Learning sessions?**

S Bull
H Lloyd

Wednesday
6th July
4.10-4.30pm
Meeting Room 2a

**Does the Positioning of Medical School Finals affect Preparation for F1?**

L Baxter
S Manning

Wednesday
6th July
4.30-4.50pm
Meeting Room 2a

**Essential Orthopaedic and Plastic Surgery Emergencies Course: the missing piece of the curriculum**

K David
N Dutta
R Najim
N Patel
A Sadri

Wednesday
6th July
4.50-5.10pm
Meeting Room 2a

**Evaluating a novel model of feedback provision for medical students: the FEEDBK model**

C Hall
S Hogan
M George
S Trinh
R Vithlani
C Morton
A Sam

Thursday
7th July
3.50-4.10pm
Meeting Room 1a

**Experiences with Team-Based Learning (TBL): Should We Consider Establishing A UK-based Collaborative TBL Network?**

S Khogali

Thursday
7th July
4.10-4.30pm
Meeting Room 1a

**Explore the role of personality and eagerness in undergraduate high fidelity simulation performance**

R Vithlani
L Springford
C Hall
A Sam

Thursday
7th July
4.30-4.50pm
Meeting Room 1a

**Guide to Surgical Placement for Third Year Medical Students: How to Maximise Learning Opportunities**

K Gardner
C Pye
D Hunukumbure
S Das

Thursday
7th July
4.50-5.10pm
Meeting Room 1a

**Hearing Adolescent Voices: Using age-appropriate standardized patients to teach health issues in an undergraduate setting**

F Rae
J Stewart
B Bateman

Thursday
7th July
3.50-4.10pm
Meeting Room 1b

**Increasing the speed of feedback loop closure: a pilot trial investigating the utility of ‘microfeedback’ during a two-day clinical orientation course.**

A Gopal
D Pan
E Chang
NL Mudalige
J Barker
L Peters
H Knowles
T Rawson
J Pitkinn
A Sharif

Thursday
7th July
4.10-4.30pm
Meeting Room 1b
<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
<th>Date</th>
<th>Time</th>
<th>Room</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning to pass it on: An evaluation of a novel undergraduate ‘PeerShare’ scheme</td>
<td>H Anderson-Knight, K Cullen</td>
<td>Thursday</td>
<td>4.30-4.50pm</td>
<td>Meeting Room 1b</td>
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<td>7th July</td>
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</tr>
<tr>
<td>Living with ‘cancer’...for a day: a phenomenological analysis of medical students’ experiences</td>
<td>G Gormley, G Roustan, M Corr, T Dornan, N King</td>
<td>Friday</td>
<td>10.20-10.40am</td>
<td>Meeting Room 1a</td>
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<td></td>
<td>8th July</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical students, army training, leadership and teamwork</td>
<td>J Garner, J Earis, J Jenkins, V Jha</td>
<td>Thursday</td>
<td>3.50-4.10pm</td>
<td>Meeting Room 2a</td>
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<td></td>
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<td>7th July</td>
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<tr>
<td>Medical students’ conceptualisations of the influences affecting their decisions for or against a career in general practice?</td>
<td>S Nicholson, AM Hastings, RK McKinley</td>
<td>Thursday</td>
<td>4.50-5.10pm</td>
<td>Meeting Room 2a</td>
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<td></td>
<td>7th July</td>
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<tr>
<td>Preparation for Practice: A Novel Role for General Practice in Pre-Foundation Programme (FP) Assistantships</td>
<td>PSJ Ryan, GJ Gormley, N Hart</td>
<td>Thursday</td>
<td>4.30-4.50pm</td>
<td>Meeting Room 2a</td>
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<td>7th July</td>
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</tr>
<tr>
<td>Stress in Simulation – accuracy of judgments made by facilitators regarding student stress</td>
<td>A Loveland, R Thomson, J Stewart</td>
<td>Friday</td>
<td>9.00-9.20am</td>
<td>Meeting Room 1a</td>
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<td></td>
<td>8th July</td>
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<tr>
<td>Teaching Deep: Using the Experiences of Teaching and Learning (ETL) Questionnaire to Assess an Undergraduate Curriculum</td>
<td>D Majumdar, A woodman, E Fowler, C Banks, K Jones</td>
<td>Friday</td>
<td>9.20-9.40am</td>
<td>Meeting Room 1a</td>
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<td></td>
<td>8th July</td>
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<tr>
<td>Teaching musculoskeletal medicine and surgery in dedicated teaching clinics: The role of patients as tutors</td>
<td>C Dover, C Wynn-Jones</td>
<td>Friday</td>
<td>9.40-10.00am</td>
<td>Meeting Room 1a</td>
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<td>8th July</td>
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<tr>
<td>Teaching the Teachers: equipping tomorrow’s doctors</td>
<td>C Banks, R Holman, J Barr, K Else, J Moffatt</td>
<td>Friday</td>
<td>10.00-10.20am</td>
<td>Meeting Room 1a</td>
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<td>8th July</td>
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<tr>
<td>The ‘Introduction to Clinical Medicine’ workbook improves student learning and behaviour during transition between pre-clinical and clinical settings</td>
<td>S Hogan, M George, O Halse</td>
<td>Friday</td>
<td>9.00-9.20am</td>
<td>Meeting Room 1b</td>
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<td>8th July</td>
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<tr>
<td>The impact of FY0 Assistantship on perceived preparedness for work: An Audio Diary study of the student experience.</td>
<td>T Toner, P Watson</td>
<td>Friday</td>
<td>9.20-9.40am</td>
<td>Meeting Room 1b</td>
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<td></td>
<td>8th July</td>
<td></td>
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<tr>
<td>The introduction of online learning materials directed towards written clinical skills training for medical undergraduates: A survey evaluation of perceived benefit.</td>
<td>E Lea, V Ware, S Hill</td>
<td>Friday</td>
<td>9.40-10.00am</td>
<td>Meeting Room 1b</td>
</tr>
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<td>8th July</td>
<td></td>
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<tr>
<td>The medical student at a cardiac arrest – the elephant, or mouse, in the room?</td>
<td>C Earnshaw, H Chant, G Kneipl, CD Rodd</td>
<td>Friday</td>
<td>10.00-10.20am</td>
<td>Meeting Room 1b</td>
</tr>
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<td>8th July</td>
<td></td>
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<tr>
<td>Undergraduate Point-of-Care Simulation Training: A novel approach to supporting transition to practice</td>
<td>N Botting, J Fawcett, S Hall, H Burton, A McNutt, R williams, C Lobo, K Kamalanathan, J Sansom</td>
<td>Friday</td>
<td>9.00-9.20am</td>
<td>Meeting Room 2a</td>
</tr>
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<td>8th July</td>
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<td></td>
</tr>
</tbody>
</table>
Use of peer teaching to introduce teaching skills training to year 3 undergraduate medical students
A Chu T Lwin N Salooja Friday 8th July 9.20-9.40am Meeting Room 2a 182

What Makes A Good Doctor? Using Q Sort to Explore Medical students' Views
N Jones A Bullock E Muddiman Friday 8th July 9.40-10.00am Meeting Room 2a 183

Papers Presented outwith the Parallel sessions

Joint ASME/GMC Excellent Medical Education Awards 2016

Undergraduate Category:
The impact upon 4th year medical students and their supervisors of a one-year immersive community based medical clerkship in rural Scotland
S Law F Muir Friday 8th July 11.40am-12.20pm Main Auditorium 186

Postgraduate Category:
Roles Reversed: FY1s experiences of Student Assistantships as Supervisors
SE Wells A Bullock LV Monrouxe

CPD Category: Developing a coding framework to understand the Behaviour Change Techniques used in CPD
J Hart L Byrne-Davis

New Researcher Award 2016

Distinguishing three unprofessional behaviour profiles of medical students using Latent Class Analysis
M Mak-van der Vossen W van Mook J Kors W van Wieringen S Peerdeman G Croiset R Kusurkar

Sir John Ellis Student Prize 2016

Undergraduate Pre-hospital Care Manuals
R Gratton D Whitehouse Friday 8th July 12.20-12.50pm Main Auditorium 192

TASME Teaching Innovation and Excellence Award (TIE)

Bleep in the Bag – a 90 minute seminar and educational game for final-year medical students
C Hall R Vithlani Thursday 7th July 2.20-3.20pm Meeting Room 2b 194

Acute Care Course for Adult Patients – a one day critical care course for FY1 doctors
G Morrison 194

Eyesi – an innovative trainee led generic basic microsurgical skills simulation teaching programme
YN Neo 194
What's Hot in Learning & Teaching Innovations in Medical Education

Programme

Educator Innovator Award Winners 2016:
Interactive high fidelity patient simulations delivered to large group pre-clinical cohorts in the lecture theatre

C Guilding

A novel teaching ophthalmoscope: The impact on learning and assessment of fundoscopy and the implications for understanding the modalities of feedback

C Schulz

What's Hot abstract Submissions
Validity of situational judgement tests: are they effective tools to assess professionalism?

P Whitfield

“I'm a medical educator, get me out of here!” Exploring the tensions

A Sethi
SJ Schofield
R Ajjawi
S McAleer

Posters Index
The Clinical Teacher Traveling Fellowship 2016

The Wicked Problem of curriculum reform in undergraduate medical education – insights from travelling fellowship to Canada

L Hawick, J Cleland, S Kitto
L Hawick School of Medicine, Medical Sciences and Nutrition, University of Aberdeen

Background
Curricula development and change are ongoing continuously in undergraduate medical education. However, while there is much interest in curriculum content and mode of delivery, research on this topic tends to take the stance that reform is (relatively) straightforward. This has led to the situation where reform is often an exercise that results in repetition of sameness but no actual reform in the process (Whitehead et al., 2013). We had a naturally-occurring opportunity to explore these processes locally, with the launch of the new Aberdeen curriculum in 2009. Our aim was to explore the change agents’ perspectives of the aims and objectives of the reform and to illuminate the hidden, or unacknowledged factors operating to influence and challenge the enactment of change.

Purpose of the fellowship
The purpose of the Clinical Teacher Fellowship is to:

1. Present the project to Canadian colleagues and engage in scholarly discussions about the influences (global and local) on curriculum reform.
2. To build on and develop professional collaborations between Canadian colleagues and the University of Aberdeen medical education research team.
3. To enhance my insight and knowledge into different perspective on curriculum reform.

The project
Funded by ‘The Clinical Teacher Travelling Fellowship’, the fellowship will be undertaken in May 2016. Time will be spent with a number of colleagues at The Wilson Centre, Toronto; McGill University, Montreal; and the Department of Innovation in Medical Education, University of Ottawa. The aim of this visit is to gain information and insight into some of the global and local influences which are impacting curriculum reform processes in undergraduate medical education. A firm research plan to enhance and continue these collaboration will one outcome from the travelling fellowship.

Results and Discussion
Experience gained from feedback and discussions with Canadian colleagues; comparing and contrasting my experience of UK curriculum reform will be presented. Outcomes from various discussions; personal observations, attainment of new insights into curriculum reform and developing scholarship will also be presented.

References
Medical Education Travelling Fellowship 2016

“Help, I’m out of control!”: Students’ emotional and behavioural responses to complexity.

E Helmich, L Diachun, R Joseph, K LaDonna, N Poel, L Lingard, S Cristancho
E Helmich, Center for Evidence-Based Education, Academic Medical Center (AMC-UvA), University of Amsterdam, Amsterdam, The Netherlands, Meibergdreef 9, room J1A-138, 1105 AZ, Amsterdam, The Netherlands. Email: e.helmich@amc.uva.nl

Background and purpose
Understanding and managing emotions in oneself and others is crucial for medical trainees, and central to professional development 1,2. Although there is some evidence on how medical trainees and practicing physicians respond to emotional situations in medicine, we do not know how medical trainees perceive and respond to emotions that arise in complex situations in day-to-day clinical practice. Responses to complexity are varied and poorly understood. However, an emotional component can often be identified 3. With increasing levels of complexity in modern healthcare, we therefore sought to know how students respond to the emotions that may arise in complex situations.

Methodology
In an international constructivist grounded theory study, 29 trainees drew two Rich Pictures 4,5: a complex clinical case they found exciting and one they found frustrating. Then the pictures were used to guide semi-structured, individual interviews. Drawings and interviews were collected and analyzed iteratively.

Results
Participants’ drawings depicted a range of personal emotions in response to complexity, from pride and happiness to anger, powerlessness and disgust. Interviews provided more insight into trainees’ cognitive and behavioral responses to the emotions portrayed in their drawings, such as empathizing with or distancing oneself from patients and families in complex situations. Trainees’ emotional responses were not straightforwardly predictable; e.g., scenarios they identified as ‘frustrating’ could provoke positive emotions. The main characteristic influencing students’ emotional responses to complexity was whether or not they felt able to control the situation.

Discussion and conclusions
Students demonstrated a wide range of emotions in response to complex clinical situations in their training. Visual methodology seems to be a powerful approach to capturing these emotional responses. Regardless of the valence of the emotions, a sense of control seems to be the most important factor influencing trainees’ emotional and behavioral responses to complexity. Educators should attend to students’ responses to the complex clinical situations they encounter, and should consider ways to prepare students for feeling out of control in clinical training situations. Future research should explore what ‘control’ means for medical trainees.

References
Measuring the Influence of Commercial Entities in the Twitter backchannels of medical conferences

T Desai, V Dhingra, A Shariff, A Shariff, E Lerma, P Singla, S Kachare, Z Syed, D Minhas, R Madanick, X Fang
T Desai, Division of Nephrology, W.G. (Bill) VA Medical Center, Salisbury, North Carolina

Twitter backchannels are increasingly popular at medical conferences. A variety of user groups, including healthcare providers and third party entities (e.g., pharmaceutical or medical device companies) use these backchannels to communicate with one another. These backchannels are unregulated and can allow third party commercial entities to exert an equal or greater amount of influence than healthcare providers. Third parties can use this influence to promote their products or services instead of sharing unbiased, evidence-based information. In this investigation we quantified the influence that third party commercial entities had in 13 major medical conferences.

We analyzed tweets contained in the official Twitter hashtags of thirteen medical conferences from 2011 to 2013. We placed tweet authors into one of four categories based on their account profile: healthcare provider, third party commercial entity, none of the above and unknown. We measured Twitter influence in three ways: 1) frequency table of the number of tweet authors per category, 2) tweet-to-author ratio by category, and 3) PageRank of tweet authors by category.

We analyzed 51159 tweets authored by 8778 Twitter account holders in 13 conferences that were sponsored by 5 medical societies. A quarter of all authors identified themselves as healthcare providers, while only 18% could be identified as third party commercial entities. Healthcare providers had a greater tweet-to-author ratio than their third party commercial entity counterparts (8.98 versus 6.93 tweets). Despite having less authors and composing less tweets, third party commercial entities had a statistically similar PageRank as healthcare providers (0.761 versus 0.797).

In our most sophisticated analysis (the PageRank), the Twitter influence of third party commercial entities is similar to that of healthcare providers. This finding is surprising because the number of tweets and third party commercial entity authors required to achieve this PageRank is far fewer than that needed by healthcare providers. Without safety mechanisms in place, Twitter backchannels can devolve into a venue for the spread of biased information rather than evidence-based medical knowledge, as that seen at lives conference. Continuing to measure the influence that third parties exert can help conference organizers develop reasonable guidelines for Twitter backchannel activity.
New Leaders Award 2016

An Innovative Look at Interprofessional Learning

S Nagraj
S Nagraj, Clinical Lecturer in Medical Education, Norwich Medical School

Background
The World Health Organisation have identified interprofessional collaboration as the “key to providing the best in patient care” (1). The importance of interprofessional collaborative practice has also been highlighted following a number of high profile cases within the UK (2,3) and is recognised by professional bodies, such as the General Medical Council as one of the key professional competencies of doctors (4). In order to achieve this level of collaborative practice in their working lives, it is important for healthcare students to be exposed to, and learn from each other during their undergraduate education.

Educational Initiative
At the University of East Anglia, an undergraduate interprofessional education curriculum has run for several years (5). In response to student feedback outlining that they found prescribing skills particularly challenging, a new initiative (conceived by colleagues in the Clinical Skills team at the Norfolk and Norwich Hospital) was piloted in 2011. Now known as Interprofessional Clinical Skills (ICS), fourth year students of medicine and pharmacy are paired together to work through six clinical ‘stations’, based within a simulated practice setting. Tutors with professional backgrounds in pharmacy and medicine provide immediate feedback to students regarding their management of the case, as well as their ability to work together effectively.

Leadership & Development
Since taking on leadership of the ICS following the roll-out across the curriculum in 2013, significant challenges have been met. These include administration & timetabling across professional schools, recruitment & training of tutors, instituting organisational change in the delivery of the ICS, as well as encouraging attitudinal change amongst staff and students towards Interprofessional Learning within the undergraduate curriculum.

The ICS has been very successful, with 98% of participating healthcare students strongly agreeing or agreeing to the statement “I enjoyed this session”. We have also run an ICS between final year nursing and medical students. Earlier this year, two new initiatives were piloted; the first being an ICS between paramedic and medical students, receiving excellent feedback once again. The second initiative was a home-based simulation exercise following the same format as the ICS, around Stroke and discharge planning. This home-based simulation exercise involved patients with lived experience of Stroke, as well as peer tutors, which added extra dimensions to the student learning experience. It is hoped that these initiatives will play an important role in improving collaborative practice for next generation of healthcare professionals.

References
ASME/GMC Joint Excellent Medical Education Award 2015: CPD category

Authentic undergraduate placements in GP: a recruiting force for generalists? A realist evaluation of how the undergraduate learning environment influences career choices

J Lefroy, R McKinley, R Kinston, S Gay, S McBain, S Yardley
J Lefroy, Senior Lecturer in Medical Education, Keele University School of Medicine, Clinical Education Centre
RSUH, ST4 6QG

Background
The current GP workforce and recruitment crisis prompted us to question how junior doctors decide on their training posts and why the proportion choosing General Practice is far short of the 50% Health Education England target. Since embarking on this study, the impasse over junior doctors’ contracts has created a further crisis in recruitment to hospital and psychiatry training posts.

Career intentions of future doctors begin to form in medical school but differ substantially between schools. The reasons for differences are complex but may be due to curricular differences: Hastings, Nicholson and McKinley have reported findings that suggest the provision of high quality authentic placements during which students engage with clinical activity is a major attractor to a speciality. ¹

With the ASME/GMC Excellent Medical Education award we extended a study of a cohort of Keele students who have been followed through their transition to FY. We explored with the same cohort and their colleagues from other medical schools:

- What underpins the choice of speciality for training of Foundation2 (FY2) doctors from Keele and other medical schools
- The influence of undergraduate curricula, in particular exposure to specialities (including General Practice), on the doctor’s thinking about career options.

Methods
F2 doctors were interviewed by telephone using a semi-structured interview schedule. We used realist evaluation to understand the influence of context (focusing on placement experiences and memorable formative incidents), on career choices at FY2, and the mechanisms by which the educational environment may shape these career choices.

Results
At the time of writing this abstract data collection and analysis is incomplete and the results are therefore tentative.

Medical School context affected career thinking in two main ways. One was by exposing students to the perceived realities of a career path, mechanisms such as attraction or repulsion, matching or clashing with prior perceptions, and weighing up of priorities could be set in motion. Role models and their opinions of their own career were important in this context. The second set of mechanisms triggered by exposure on placements was the personal testing and understanding of aptitudes for career roles.

Conclusion
The F2 participants in this study have changed their minds about career choice possibly more than previous cohorts because of the current context but have still drawn on their medical school experiences which have helped them to understand some realities and to test their own aptitudes for the various types of medical career.

References
ASME
Best Original Research Paper Award
2016 Finalists
The road to general practice: constructing professional identity in GP training

JL Johnston, M Donnelly, G Gormley
JLJohnston, Centre for Medical Education, Queen’s University Belfast, 1 Dunluce Ave, Belfast, BT9 7HR, j.l.johnston@qub.ac.uk

Background/Purpose
Junior doctors in vocational training for general practice face challenges to their professional development which are unique within medical training. In the UK, GP trainees spend half their training time (usually eighteen months) rotating around hospital specialties, during which time they have limited contact with the world of general practice. The structure of training means that GP trainees in hospital undergo frequent transitions not just between teams and specialties, but also between primary and secondary care environments. In addition to the disruption of frequent transitions, trainees in hospital are socialised into specialty cultures and working practices which vary fundamentally from family medicine. While working in hospital, they may also experience undermining messages about their career choice.

Despite the importance of general practice within the framework of NHS service delivery, issues of professional development and the development of identity within GP training have received almost no attention in the literature. We explored the construction of identity in GP training, with particular regard to the dynamic interaction between structure and agency in this context and its consequences. These can be interpreted both in terms of individual identity shift as a result of environmental engagement, and the effect upon the cultural environment itself.

Methods
We used a sociocultural theoretical framework, drawn primarily from Holland and Lave’s social practice theory, but also incorporating aspects of communities of practice theory as a way of conceptualising the variable landscape of practice traversed by GP trainees. Social practice theory is an anthropological theory of identity as practice, building on figured worlds theory, in which situated cultural contexts provide a basis for the formation of self. From this position, large-scale enduring ideological struggles offer particularly piquant sites for identity formation, as the individual is drawn into interaction with the struggle through local contentious practice.

We conducted semi-structured interviews with eight junior doctors in early GP training within the NHS in Northern Ireland. Longitudinal follow up of this cohort constitute a second study currently in progress. Utilising this framework with an orientation towards lived experience, a form of experience-centred narrative analysis, based on principles of meso-linguistic discourse analysis, was employed to examine thematic and linguistic features.

Results
Primary and secondary care were discursively constructed within the data as being separate paradigms and even epistemologies of medicine, the interaction between the two becoming a site of long-term conflict in keeping with Holland’s model of enduring struggle. General practice, and consequently GP trainees working in hospital, were frequently positioned by hospital clinicians as being of lower status as a result of poorly understood paradigm differences. By encountering hostility towards their choice of career, trainees were inadvertently drawn into local contentious practice. Consequently, their professional identity as GP trainees was built around a central premise of difference and conflict.

In response to being positioned as outsiders while working in hospitals, GP trainees constructed an alternative community of practice beyond the boundaries of their daily work, in which they drew on cultural artefacts relative to general practice. These included the contrasting genres of primary and secondary care consultation, prescribing practices, and administrative practices. Prior experience of general practice work, particularly during foundation training, helped trainees to manage challenges associated with working in hospital, and to employ different coping strategies compared to peers.
lacking this experience. Trainees who had spent time as GP F2 doctors were more likely resist negative positioning, and to resolve the hospital/community dialectic in a positive manner. This experience was therefore highly protective in terms of identity development.

Conclusion
GP training offers a special case within medicine, offering a trajectory of profound cultural disruption. The identity of GP trainees in hospital is thus predicated on not belonging, and on paradigm conflict. Furthermore, the existence of GP trainees within hospitals perpetuates a historically constructed perception of general practice as being of lower status than hospital medicine. Such conflict in itself, playing out in interactions between hospital clinicians and GP trainees in hospital, reifies differences between primary and secondary care medical paradigms. These are major concerns for medical educators, particularly given the current UK political context, in which general practice is under considerable pressure and attrition from the profession is an issue. Educators should support family medicine trainees during hospital posts, ensuring that they follow a curriculum orientated towards the community. Promoting early career experience of general practice, and increasing the availability of foundation posts in general practice, is likely to maximise retention through development of realistic expectations and effective coping strategies.
Behind the scenes: an exploration of roles and relationships in the OSCE triad

GJ Gormley, M Corrigan, K Cullen, JL Johnston
GJ Gormley, Centre for Medical Education, Queen’s University Belfast, N Ireland.

Background and Purpose
Objective Structured Clinical Examinations (OSCEs) are widely used in medical education assessments, particularly high stakes examinations that determine student progression and certification [1,2]. The dominant psychometric discourse in OSCE related research has conferred many insights into this form of assessment [3,4]. However such a positivist discourse does not paint an entire picture of the contextual and social dimensions of OSCEs [5,6]. OSCEs are socially situated activities where candidates interact with simulated patients (SPs), in the presence of examiners. Social environments impact on the way individuals present themselves and interact with others [7]. Socio-cultural research offers perspectives into the complexity of human interactions and the importance of context [8,9]. To date, research has largely overlooked the interactions and relationships occur within the OSCE triad (i.e. candidate, SP and examiner), in its naturalistic summative setting.

In this study, we used qualitative methods to look in-depth at the social roles and interactions within OSCEs. From this viewpoint we considered how this information might be used to reframe our thinking about OSCEs.

Methods
A video ethnographic approach was used, drawing upon Goffman’s dramaturgical metaphor as an analytical lens. Goffman reasoned that during social interactions, individuals adopted performance methods in an attempt to exert control over the perceptions of others about their identity [10]. As OSCEs are socially situated enactments, Goffman’s dramaturgical metaphor was considered a good theoretical fit.

Fourth-year medical students, OSCE examiners and SPs at QUB were recruited by email. Volunteer demographics were used to generate a maximal variation sample comprising 6 candidates, 6 examiners and 6 SPs, allowing 18 summative OSCE station triad encounters to be selected for analysis in this study. Following consent, participants were allocated to an OSCE circuit containing unobtrusive ceiling mounted video-cameras. OSCE station encounters were recorded in their natural settings to allow interactional practices to be contextually explored. Video footage of all 18 triadic encounters were transcribed using a recognised transcription convention [11]. Data comprised of video footage, transcripts and fieldnotes.

Three members of the research team independently conducted an inductive analysis on the data, focusing on social roles and interactions. Video data and transcripts were reviewed multiple times in order to become sensitised to the OSCE experience under investigation. The researchers then met to agree on dimensions for further focus, drawing upon Goffman’s dramaturgical metaphor. Each transcript was then analysed interpretively, with constant reference to the video footage and reflexivity checks. Analysis was shared frequently to check for our predilections/omissions. Finally a comparative analysis across all 18 triads took place before consensus was reached by the research team.

Results
126 minutes of video footage was captured. In terms of a foreground to this study, the layout and artefacts were considered:
Four main themes were identified:

1) ‘Creating the right impression?’
   On entering the station (front stage), candidates focussed on impression management with a desire to conform to examiners’ expectations and ‘play the OSCE game’. However, performances were often formulaic with a digitised questioning style and an absence of the natural to-and-fro of normal conversation.

2) ‘A performance of contradictions’
   Contradictions and contradictions occurred in the OSCE that were in direct opposition to assumptions about OSCEs. Competency and compassion are key tenets of what make a good doctor. However within the framework of OSCEs, the pursuit of displaying competency was often placed in opposition to displaying compassion to ‘patients’.

3) ‘Simulated patients: instrumentalised, objectified and industrialised’
   OSCEs induced dehumanization behaviour. Despite SPs providing a ‘human face’ to their role candidates interacted with SPs as if they were more a prop than a person.

4) Examiners hold the power: hierarchy within OSCEs.
   OSCEs bring about social order and hierarchy within the triad. Examiners, as the primary audience, hold the greatest power which is mediated by possessing of the OSCE checklist.

Discussion and Conclusions
By providing deep insights into the realities of social roles and dynamics that occur within OSCEs. OSCEs are a complex form of drama that do not necessarily reflect the true social interactions of clinical practice. They promote a contrived and decontextualized reality, with a concerning shift from patient-centric to checklist-centric behaviours. Whilst checklists provide objectivity, they also encourage a presentation of self that is not in keeping with the qualities of being a good doctor [12]. In the pursuit of standardisation, OSCEs can promote undesirable behaviours. Assessment drives learning but could OSCEs be distorting learning and may be driving professional socialization in the wrong direction. Rooted in empirical and contextually rich data, the findings of this study open up new ways of thinking about OSCEs. This unique study challenges many of our pre-existing assumptions about OSCE and behoves us to reframe and enrich future assessment practices – for example by informing OSCE station design, examiner / SP training and external regulatory organisations that shape OSCE practice.
References
Improving Trainee Engagement with the Higher Surgical Training Program through establishment of a Trainee Board

K Keogh, R Bamford, P Boorman, R Longman
K Keogh, Royal Devon and Exeter Hospital. Barrack Road, Exeter, EX2 5DW.

Background
The last decade has witnessed a sea change in higher surgical training. A combination of increasing workload, fewer core trainees and shift pattern rotas due to the European Working Time Directive have led to a perceived decrease in the amount of time in work available for training. In more recent years this led to a dwindling number of trainees being able to attend training days culminating in the total abandonment of regional higher surgical training days. As part of an effort to reinvigorate the scheme a trainee board was formed to engage trainees in the process.

Method
The program director outlined their vision for an entirely more active role for the new trainee representative. As opposed to one representative there would now be a board with a variety of responsibilities including induction, education, IT and social representatives.

The lead trainee (chair) through open application appointed a board of trainees including

- One trainee as vice chair
- Four trainees to run the training and induction program with consultant trainers
- One trainee as IT lead for the regional website
- One trainee to manage social media to improve communication
- One trainee to organize social events

Discussion and Conclusions
While still in it’s infancy the implementation of a board has thus far been a success. The trainee website has been entirely overhauled to a much more useful resource. In addition there are now closed forums on Facebook and Twitter to improve communication with trainees. A highly successful sponsored three-day boot camp for new ST3s is running. Two training days have been organised with upwards of 25 trainees at each (compared to half a dozen before the changes). Forthcoming training days are now well-advertised and attracting increased interest. Three social events have occurred which have been well attended.

In addition the board was able to organize further representatives from each trust to obtain and provide feedback for the mandatory Quality Panel meeting used to assess and improve teaching posts.

In summary the formation of a board of trainees has improved communication, increased empowerment among trainees and led to increased attendance at a newly rejuvenated training day program.
Timing of assessment and engagement with clinical experiences during Obstetric & Gynaecological 4th Year Medical Student Placement

J Gomersall, I Cooke, J Costa
Ulster Hospital, Dundonald, Centre for Medical Education, Queens University Belfast*

Background and Purpose
It is recognised that assessment itself drives learning\(^1\) and so direct students towards “studying to the test”. Preparation for exams can deviate students from clinical environment resulting in poor engagement in activities, which may be useful in their future careers. At Queens University Belfast medical students complete a 6 week Obstetrics & Gynaecology placement in 4th year. Until the end of academic year 2014/15 they were assessed by completion of clinical diaries and a written exam at the end of the placement. The clinical diary guides the students to become involved and learn through practice while recording compulsory and optional clinical experiences. From 2015/16 this exam will be held annually at the end of the year. It was felt that less assessment would encourage students to engage more with clinical learning opportunities. Few compulsory clinical experiences such as observing an instrumental delivery were made optional to prevent students chasing for “sign off”, which could impair learning. The study was designed to ascertain if above changes motivated the students to record more than minimum number of clinical experiences irrespective of them being optional.

Methodology
A proforma was designed to collate number of compulsory and optional clinical experiences as recorded by the students in their clinical diaries. Diaries from the final cohort of 2014/15 (42) & first cohort of 2015/16 (40) were reviewed and the numbers were compared.

Results
All students met the minimum number of vaginal deliveries, with fewer exceeding the minimum in the second cohort. All students met the minimum requirements of gynaecological and obstetric case based discussions, with more students in the second cohort exceeding the minimum. However despite all bar 1 student meeting the minimum requirements for abdominal palpation, bimanual and speculum examinations the number of students documenting above the minimum fell for bimanual and speculum examinations. The criteria reduced to optional, observation of instrumental delivery fell from 100% to 63%.

Discussion and Conclusions
Virtually all students met the minimum criteria in both cohorts. The clear drop in students observing instrumental delivery after it became optional supports the premise that assessment drives learning\(^1\) Overall, no clear change was observed in the documented numbers of clinical experiences following the implementation of delayed written assessment. Anecdotally students reported feeling uncomfortable requesting signatures so they may have only documented the minimum required but actually participated in more clinical experiences without compulsion to record it.

References
Acute care simulation: Does mental workload correlate with scenario workload and performance in third year medical students?

M Hollifield, S Tolchard, J Morgan
M Hollifield, Clinical Teaching Fellow, North Bristol Academy, University of Bristol, Southmead Hospital, Bristol, UK

Background and objective
Mental workload is an abstract concept defined as the interaction between the demands of a task and the performance of the operator

Simulation-based training has become widely featured in undergraduate medical curricula to provide a safe environment for students to apply theoretical knowledge in order to manage acutely ill patients, as well as developing non-technical skills including effective team working and situation awareness. Whilst mental workload of anaesthetic and surgical trainees during simulation training has previously been investigated, only one study has looked at using these techniques with medical students during a simulated outpatient consultation. The objective of the current study is therefore to determine whether students’ mental workload relates to performance or scenario workload in the context of acute care simulation.

Methods
Approximately 40 third year medical students will be asked to participate during simulation sessions run as part of their junior medicine and surgery clinical block. Using a previously published methodology, performance checklists covering observable clinical tasks that should be carried out will be created for each simulation and reviewed for validity by several experienced clinicians involved in undergraduate simulation teaching. Primary task (scenario) intensity will be assessed by the quantity of clinical tasks possible, with performance measured by the number of tasks actually completed by the participant. Subjective assessment of mental workload will be assessed immediately following the scenario using the NASA Task Load Index questionnaire.

Results
Full statistical and descriptive results will be presented at the annual scientific meeting.

Discussion and conclusions
Given that simulation-based training has become a commonplace method of teaching medical students, insights into their level of mental workload within a scenario may provide clinical teachers with a more comprehensive understanding of students’ learning needs. If a significant correlation between mental workload and performance is found, this may be an important but so far overlooked factor to consider both in terms of designing better scenarios and assessment of student performance in acute care simulation.

References
Pharmacist-led feedback workshops increase appropriate prescribing of antimicrobials.

L McLellan, T Dornan, P Newton, SD Williams, P Lewis, D Steinke, Mary P Tully
L McLellan, University Hospital of South Manchester, lucymclellan@nhs.net

Introduction
Inappropriate antimicrobial prescribing is a common cause of increased patient morbidity and mortality in hospitals. Further, the impact of suboptimal prescribing extends beyond the immediate consequences for individual patients and doctors, to the wider context of a potential global epidemic of antibiotic-resistant infections. Our aim was to provide medical educators with proof-of-concept for an intervention to improve prescribing, which could be widely implemented. More specifically, our objective was to design a randomised controlled trial to explore the impact of a novel pharmacist-led feedback intervention for junior doctors.

Methods
The study used a randomised controlled trial study design to investigate whether and how structured feedback sessions could increase rates of appropriate antimicrobial prescribing by junior doctors. As well as analysing rates of appropriate prescribing, for both a control and intervention group, qualitative interviews were conducted to explore influences on doctor’s prescribing behaviour. The analysis was based primarily on complexity thinking, but also drew on social learning theories and cognitive theory by considering how doctors’ perceptions of best prescribing practice, and prescribing behaviour in practice, were both cognitively and socially constructed.

Findings
For the intervention group, the mean normalised rate of suboptimal to all prescribing was 0.32±0.36; for the control group, it was 0.68±0.36. Analysis of qualitative interviews showed that individuals’ prescribing behaviour was influenced by a complex series of interactions between individual and social variables, such as interplay between personal knowledge and the expectations of others:

“Sometimes it’s not always clear… I should probably ask but sometimes you don’t have time, or… maybe I just wasn’t listening… I don’t want to look stupid.”

Junior doctors and their senior colleagues often perceive suboptimal prescribing as being acceptable or necessary within the complexity of medical practice:

“[Surgical ward rounds] are so fast you don’t know if you’re coming or going… so, yeah, you know… there are those prescriptions that might not be as good as you’d like them to be.”

Discussion and conclusions
The feedback intervention was a positive stimulus within a complex network of influences on junior doctors’ prescribing behaviour. In view of this complexity, we suggest that improving medical education should be a process of optimising, rather than controlling, the conditions for effective learning and practice. We have proposed a model that could assist educators in considering how cognitive and sociocultural factors influence practice. This could be applicable to many aspects of work and workplace learning.
A Realist Review of what works for whom, how, and why for pharmacists to develop interpersonal pharmacist-patient communication?

A Kerr, J Strawbridge, C Kelleher, J Burns, P Pype, F Mertens, M Deveugele, T Pawlikowska
A Kerr, Pharmacy Intern, Health Professions Education Centre, Royal College of Surgeons in Ireland, 123 St. Stephen's Green, Dublin 2, Ireland

Background and Purpose
The competencies required by most pharmacy organisations to be deemed fit to practice include effective interpersonal communication skills (1). A 2010 review of communication training in pharmacy education, found no clear consensus on the effectiveness of current methods of communication skills education (2). This review aims: to explore the range of communication skills training for pharmacists, to allow pharmacy educators to provide students with optimised communications training, to identify methods of communication skill development for pharmacists in order to obtain certain outcomes depending on circumstances. The review question is, what works for whom, how, and why for pharmacists to develop interpersonal pharmacist-patient communication?

Methodology
Communication learning can result from various and complex interactions in the pharmacy context during education, CPD and practice-based learning. The methodology being used is realist review, an innovative approach, which asks what works, for whom, in what circumstances, to what extent and why? (3) Through changing the context for the same interaction, different outcomes may be generated. Realist research explores the link between context, mechanism and outcome. Realist reviews are theory driven interpretative narrative summaries which uses interpretive cross-care to explain and understand why different outcomes are achieved (4). Realist reviews make use of multiple search strategies to answer to test theories that lead to a comprehensive theory on research questions (4).

Results
A scoping review has been carried out and 15% of the papers were deemed suitable for inclusion.

Discussion and Conclusions
These papers were all designed communications courses, 66% of included papers were courses for qualified pharmacists and 33% for students. No opportunistic learning was noted in the subset of papers reviewed to date and it appears that experiential learning works for both students and professionals in various circumstances. A spirograph diagram will be produced to visualise the pattern of mechanisms leading to outcomes based on included data. We expect to make recommendations for those who wish to develop interpersonal pharmacist-patient communications training including: a summary of methods to develop interpersonal pharmacist-patient communication skills, an analysis of what works when, for whom, how, and why and suggestions for incorporation of communications training into pharmacy curricula.

References
Continuing Professional Development
Enhancing the impact of education and training with action planning and coping planning

J Hart, L Byrne-Davis
J Hart, Manchester Medical School, Stopford Building, University of Manchester, Manchester M13 9PT.

Feedback is considered to be crucial in the development of expertise in communication skills. It has been proposed that action planning is an important part of the mechanism to inform future learning, through which health professionals and health professional trainees are able to improve their practice and performance following feedback and subsequent action planning.

Recent work (Hart, Byrne-Davis, Wass, Harrison, in preparation) explored the frequency and quality of action plans that medical students made following practice OSCEs. Most students made an action plan, but these were not specific enough to prompt change in their practice. Whilst action plans are a common part of education and training, the way in which these are created is crucial.

The effect of action planning and coping planning (overcoming expected barriers to implementation) in changing health-related behaviours has been thoroughly demonstrated (Sniehotta, 2009). One method, the use of a ‘volitional help sheet’, has been shown to improve behaviour change in multiple health behaviours (e.g., Armitage, 2008, Armitage, 2012, Arden, 2012). The volitional help sheet is brief and structured so that participants quickly make effective plans, often called implementation intentions (and commonly known as if-then plans). By making these specific plans, participants are more likely to be more effective in changing their behaviour.

The use of implementation support tools, in this specific and evidence-based way, is not a typical element of education and training. We propose that by routinely adding a volitional help sheet task to education and training, change in health professionals’ practice is more likely. We will present some ideas for how this could be investigated.

References

- Hart J, Byrne-Davis L, Wass V, Harrison C (2016). Specific action plans following feedback: How successful are medical students? In preparation
Exploring the impact of mentoring and buddying for undergraduate medical students: The MEntoring medical students to Navigate Transitions and Optimise Resilience (MENTOR) Study

HK Andrews, G French, R Patel.
Dr Hayley Andrews, The Bennion Centre, Glenfield Hospital Site, Groby Road, Leicester, LE3 9DZ

Background
Medical students well-being and health is poorer compared to students studying other courses. Likewise, the prevalence of mental illness among medical students is consistently higher than in the general population with evidence that levels of burnout among these individuals also significantly elevated. Although there is evidence suggesting that increasing the resilience of individuals may prevent burnout and mental illness, there is little understanding about how best to develop resilience or equip students with the necessary coping strategies for studying at medical school. The aim of this study was to explore the impact that mentoring and buddying have on the well-being of final year students since both interventions are advised by the General Medical Council as pastoral support interventions for individuals at medical school.

Methodology
A mixed-methods design guided the approach to this feasibility study. Thirty-five final year medical students were invited to participate in this study. Participants were randomised to receive either two months of mentoring, buddying or support as usual. Participants completed the General Health Questionnaire-28 (GHQ), Maslach Burnout Inventory (MBI) and the Connor-Davidson Resilience Scale (CD-RISC) before and after their allocated intervention. Participants were also invited to take part in focus groups to describe their experience of the interventions at the end of the study.

Results
There was no significant change in measures of burnout, mental illness or resilience using the MBI, GHQ and CD-RISC. The participants described mentoring as creating space to “reflect”, facilitated help seeking, giving “recognition that your problems exist and that they matter”. This allowed them to “work through issues” and ultimately “crack on” with problems or opportunities. Participants who received buddying experienced the process enabling them to obtain “hints and tips” they would otherwise get from peers, but by being more formal led them to “behave a bit better”.

Discussion
This study demonstrated that mentoring allowed students to form a relationship with someone providing genuine support and this acted as a catalyst for action. Mentoring also led to a sense of empowerment that promoted resilience at a time of significant transition. The study also demonstrated buddying led to a transactional relationship where individuals took more than they gave and did not lead to transformational change. These findings have implications for the way in which undergraduate student support services are organised as well as the training faculty needed in order to employ interventions such as mentoring to promote well-being and resilience in students.

1. References
How does learning transfer to practice to improve patient safety, clinical effectiveness and the patient’s experience?

J Illing, J McLachlan, H Hesselgreaves, P Crampton, P Tiffin, G Finn, S Corbett, M Sawdon, M Swamy, A Kehoe, S Corbett and P Crampton, School of Medical Education, Newcastle University, Ridley Building 1, Newcastle upon Tyne, NE1 7RU

Background and purpose
Educational interventions in healthcare are conducted in complex environments in which it is challenging to demonstrate causal relationships between educational input and high quality healthcare leading to patient benefit. Following the publication of the Educational Outcomes Framework\(^1\) we aimed to identify evidence based indicators for the three primary outcomes: excellent patient experience, clinical effectiveness and patient safety.

Methods
Using a theory driven realist approach we have conducted a literature review to answer the question ‘what works, for whom, in what circumstances, and in what respects’ by identifying the links between context, mechanisms and outcomes for components of the interventions\(^2\). The main databases searched were Embase, Social Services Abstracts, PsycINFO, CINAHL, and Social Care Online. The underpinning theory, tested using negative examples and refined by published evidence, describes how learning is transferred into practice\(^3\).

Results
Of 17954 papers identified in the literature search 1145 full papers have been reviewed. Each paper that was included reported an intervention and patient outcome related to the Educational Outcomes Framework. The interventions were implemented in a range of healthcare settings. In accordance with the transfer of learning theory; successful interventions have clear evidence based objectives endorsed long term by senior managers, extensive stakeholder involvement in preparation, engagement of learners by experienced facilitators, action plans supported by peers and local managers, opportunities to practice, feedback, supervision and support for implementation of learning, and careful selection and preparation of individuals motivated to learn and change practice. The mechanisms for change included the agency and empowerment of the individual learner.

Conclusions
The literature review examined a large body of evidence to unravel how education and training leads to patient benefit. The refined model will inform commissioning of training that changes practice and enhances care quality.

References
\(^1\) Department of Health (2013). The Education Outcomes Framework.
T-REx, TED, DOTS and MSF: novel workplace-based assessments for a clinical teaching fellow e-portfolio.

J Hawkins, C Earnshaw, Z Hossenbaccus, YYS Ho, M Sherwood, Z Dawood, P Davies, CD Rodd
J Hawkins, Clinical Teaching Fellow, Gloucestershire Academy, Gloucestershire Royal Hospital, Great Western Road, Gloucester, GL1 3NN

Background and Purpose
Assessment of doctors’ development in controlled situations correlates poorly with their actual performance in professional practice, hence the need for workplace-based assessments (WBAs).¹
These assessments have an established use in the clinical training environment for continuing professional development. Clinical teaching fellows (CTFs) are expected to be involved in this continuing professional development² and teach medical students effectively; yet they have no equivalent WBAs or portfolios to demonstrate development of their teaching abilities. Gloucestershire Academy has designed novel, formative WBAs, as part of our bespoke CTF e-portfolio, to support CTFs professional development in the teaching field. These assessments are known as a Teaching Review Exercise (T-REx), Teaching Experience Discussions (TED), Direct Observations of Teaching Skills (DOTS) and Multi-Source Feedback (MSF).

Methodology
Stage 1: Establishing the scope of the assessments
Critical analysis of current medical, surgical, anaesthetic and foundation training e-portfolios was conducted by clinicians of variable grades and specialities.³,⁴,⁵,⁶ Particular emphasis was placed on their WBAs. The WBAs were assessed for both positive features, including ease of use, accuracy, opportunities for feedback, and negative features such as being cumbersome, inflexible and vague. Based on these findings, we designed novel, formative WBAs specifically adapted to the needs of CTFs, which were then peer reviewed and incorporated into the e-portfolio.

Stage 2: Piloting the Assessments
The CTF e-portfolio including the WBAs was piloted from January 2016 onwards. Supervisors, assessors and CTFs within different departments were invited to participate. They completed free text and Likert based questionnaires to establish aspects of the usability and utility of the assessments including educational impact, acceptability and reliability.

Results
Stage 1 of this project is complete and the WBAs will be described.
Stage 2 questionnaire analysis and data will be presented.

Discussion and Conclusions
Doctors need to demonstrate their ability to perform in the real world context, and not just in controlled assessments, by using workplace-based assessments. These unique WBAs enable clinical teaching fellows to record and demonstrate expansion of their teaching skills and engagement with continuing professional development. Ultimately they highlight the educational and professional value of being a clinical teaching fellow.

References
Which teaching methodology best facilitates acquisition of competence in pre-operative assessment for medical undergraduates? A randomised control trial

V Medland, S Channing, K Manley
V Medland, St Michael’s Hospital, Bristol, BS2 8EG

Background and purpose
Pre-operative assessment (POA) is a core duty of junior doctors, reducing preoperative admissions, same-day cancellations and perioperative complications.¹ ² Current research has demonstrated the value of POA clinics as both a teaching and learning opportunity,³ ⁴ but foundation doctors report scant undergraduate teaching, observing rather than performing supervised POAs.⁵ We aim to investigate which teaching methodology, simulation clinic versus case based discussion workshops, can best facilitate undergraduate knowledge, competence and confidence in this area.

Methodology
A balanced randomised control trial was conducted over an academic year. Forty-seven 4th year medical undergraduates were randomised to a simulation clinic (SIM) (with 2-3 students per facilitator) or case based discussion (CBD) workshops (with up to 12 students per facilitator). A baseline questionnaire detailing potential confounders was completed. Learning outcomes were derived using NICE POA guidelines.⁶ The teaching materials developed were piloted for validity and reliability. To standardise the teaching, facilitators were provided with training on the material and the same facilitators were used throughout the academic year. All participants scored their level of confidence using a six point Likert scale adapted from a validated questionnaire.⁷ Competence was assessed by an Objective Structured Clinical Examination (OSCE), which was designed by a Delphi consensus and tested for validity.

Results
There were no significant differences in overall mean OSCE scores between SIM and CBD groups (median 15, IQR 4.0 vs 15, IQR 5.0). A total of 25 marks were given for prescribing, selecting investigations, risk assessment and formulating a management plan. Data regarding student confidence will be available for discussion at the conference.

Discussion and conclusions
This study demonstrates an evidence-based approach to choosing the teaching methodology of a clinically important subject matter. The increased staff resources required to teach SIM clinic are not justifiable with reference to student competence achieved when compared with CBD workshops, although data for student confidence will also be taken into account. The results of this study will form the basis of recommendations for potential changes to the undergraduate curriculum.

References:
The impact of e-Learning on Clinical Skills

A Courtney, A Kerry
A Courtney, Foundation Year 2 Doctor, Royal United Hospitals Bath NHS Foundation Trust, Combe Park, Bath, Avon, BA1 3NG

Background and Purpose
Respiratory examination is one of the fundamental clinical skills, traditionally introduced to medical students in the form of lectures and bedside teaching. Yet it is a well-established fact that there is significant intra-examiner disagreement on the presence of respiratory clinical signs, which can be as high as 26% (1). Some argue that this inconsistency may be a result of inadequate examination skills (2).

The purpose of this study was to create an e-learning tutorial and to assess its usefulness in improving respiratory examination skills.

Methodology
Initial needs analysis was carried out amongst medical students at the end of their third year after completing Junior Medicine (n=100). Subsequently, an online e-learning tutorial was developed to allow both descriptive, graphic and audio illustration of breath sounds, which were recorded from hospital patients. A qualitative and quantitative survey was carried out on the second year medical students (n=19), attending introduction to clinical skills week, to investigate subjective and objective impact of the e-learning tutorial on the recognition of breath sounds. Students were randomly allocated to 2 groups, both of which received standard bedside teaching, in addition to the e-tutorial. One group received the link to the e-tutorial prior to the quiz on breath sounds (n=9), another group received the tutorial after the quiz (n=10). Qualitative survey looked at the impact of e-tutorial on subjective confidence in recognising breath sounds (0-10 Likert scale) and the degree of usefulness of the e-tutorial.

Results
The initial needs analysis identified that 44% of third year students did not feel confident about identifying breath sounds and 94% wished to have an online tutorial, which allowed them to listen to breath sounds. Quantitative survey showed a significant improvement in recognition of normal vesicular breath sounds (p=0.0004), polyphonic wheeze (p=0.04) and pleural rub (p=0.002) following an e-tutorial. Qualitative survey identified 5 point increase in subjective confidence in recognising breath sounds following the online tutorial and all students agreed that e-tutorial improved their understanding.

Discussion and Conclusions
This study confirmed that e-tutorial is a useful and desired addition to traditional teaching methods on respiratory examination. Audio, visual and descriptive illustrations of breath sounds improve subjective confidence and objective competence of students. However, further research is required to determine long-term impact of this e-tutorial on subsequent development of respiratory clinical examination skills.

Reference
Faculty Development
Developing a structured teaching skills certification programme to recognise the involvement of junior doctors in undergraduate education

S Tilson, C Carus, L Wells S Tilson, Undergraduate Department, Queen’s Medical Centre, Derby Rd, Nottingham NG7 2UH. stephen.tilson@nuh.nhs.uk

Background
It is being increasingly recognised that ‘all doctors should gain a basic understanding of and skills in teaching and learning during their undergraduate and postgraduate education and training’.1 Supporting educators is one of five themes in recent GMC standards for medical education and training2, “Teaching and Training” has been added to the UK Foundation Programme Curriculum3, and providing training and recognition is explicitly mentioned in GMC guidance4. Concurrently, the benefit of using senior medical students and junior doctors in undergraduate medical education as near-peer teachers has been attested to4, with one recent study finding no advantage of faculty teaching over peer teaching5. A key part of utilising near-peer teachers therefore must be supporting them, including providing adequate training and recognising the teaching that they do1, 6. Teaching skills courses have been shown to improve competence and confidence7. There is also evidence that recognition of teaching through awards and certification has a positive impact on teachers and teaching8, 9, 10. In order to encourage and support junior doctor involvement in undergraduate education, we designed and implemented a scheme that incorporated teaching skills training and a teaching certification award.

Methods
We designed a criteria-based curriculum for a “Level 1 Teaching Award” that included attendance at a teaching skills course, 10 hours of teaching experience, evidence of reflection and senior feedback, involvement in assessment and peer review. To support this curriculum we started a half day teaching-skills workshop run by our trust’s undergraduate department, an electronic mailing list to keep junior doctors informed of local teaching opportunities, and a paper-based log book to collect evidence in. A pilot scheme was started and is being assessed for feasibility and utility by junior doctors in the Trust. Primary outcomes are a change in junior doctor involvement in undergraduate medical education, and self-assessment of competence and confidence in teaching skills.

Results and Discussion
Full results are not currently available, but will be presented and discussed during our oral presentation. 40 junior doctors have attended the teaching workshop, with more expressing an interest in the Level 1 award. Going forward, we hope that the level 1 award will be developed according to feedback and locally established with the potential for extending the project to a regional level. This pilot could also be extended to similar “Level 2” and “Level 3” awards, using a spiral curriculum as doctors with an interest in teaching progress through their training.

References:
Educational development in context: Developing a regional community of practice in psychiatry

J Shaw, M Moffat, I Cameron, D Bennett
J Shaw, MBChB and BSc MedSci Student, MBChB Office, Suttie Centre, Foresterhill. Aberdeen, AB25 2ZD

Background and Purpose
Supporting educators in their delivery of high-quality medical training, and aiding their development, is a priority amongst governing bodies in UK medical education. Challenges to this include supporting NHS colleagues who deliver the majority of clinical undergraduate and postgraduate individuals’ training in addition to their own clinical care roles. Development of a community of practice (CoP) from existing networks has shown to be a way of overcoming this issue. Our aim is to evaluate a newly-developed CoP in psychiatry in the north of Scotland. Additionally, we aim to explore the potential of CoP to be transferable into other disciplines and specialities with regard to medical education and training.

Methods
We are currently undertaking a qualitative study using the participatory action research approach. This first reflective cycle is being carried out around a regional psychiatry teaching continuing professional development (CPD) event which occurred in August 2015. Evaluative data has been collected in the form of semi-structured interviews with CPD participants, field notes, meeting minutes and evaluation forms. Analysis is collaborative, initially inductive and thematic.

Results
At the time of writing, six interviews of CPD have been undertaken, transcribed and are in the process of being analysed. Emerging themes will be presented.

Discussion and Conclusions
This project is ongoing. The presentation and discussions around the presentation will help the ongoing analysis of the data and the future steps that will be taken in supporting the community of practice.

References
Feeling valued? A study to explore the factors that influence GP teachers’ sense of value.

R Henniker-Major, E Metters, S Kumar, B Broglia, A Newth
R Henniker-Major, Department of Public Health and Primary Care, The Reynolds Building, Imperial College London, St Dunstans Road, London W6 8RP, UK, r.henniker-major@imperial.ac.uk

Background
Current UK health reforms are moving healthcare away from hospitals and into the community. The GP taskforce report in 2014 has shown a diminishing number of GPs and highlighted the need to promote General Practice as a positive career choice to undergraduates.¹ Imperial College is therefore increasing the amount of undergraduate education being delivered in primary care by GPs. To achieve this we need to significantly increase our GP teacher workforce. We wanted to explore what makes GPs feel valued as teachers to aid and inform future recruitment and retention.²

Methods
An online questionnaire was sent to all 357 GPs who currently teach our medical students. Questions looked at the importance of factors which motivate GPs to start teaching and those which would support ongoing teaching. We asked respondents to assign a value of importance to each factor ranging from 0 (not important) to 7 (very important). Respondents were also given the opportunity to add comments which were analysed using a thematic analysis technique to generate themes.³

Results
140 GPs completed the questionnaire (response rate 39%). 65% of respondents said that feeling more valued would increase their commitment to teaching. Making a difference to future doctors and the enjoyment of teaching were the main motivating factors to start teaching scoring 870 and 869 respectively out of a maximum on 980 when rating their importance. The most significant motivating theme which emerged was keeping knowledge up to date. Student feedback (scoring 835/980) and teaching update courses (724/980) were identified as the most important factors which would support ongoing teaching. Rewards (which included remuneration, teaching awards and good feedback) were highlighted as a theme which would also support ongoing teaching.

Discussion
This study supports the theory that increasing GP teachers’ sense of value is important for increasing their commitment to teaching and therefore their retention in the undergraduate teaching programme. In conjunction with these results, our Primary Care Department has been developing teacher training and updates for our teachers. Imperial College is also looking at ways to improve student feedback across all courses. In order to further explore the themes identified so far we plan to undertake semi-structured interviews with a selection of community GP teachers. We will use these results to develop strategies to increase our GP teachers’ sense of value with the aim to subsequently increase their retention and to accommodate future changes to undergraduate teaching.

References:
How can we turn enthusiasm into action? Motivating our army of educators!

E Hampton, A Gad, E Carr, K Hainey, H Monaghan
E Hampton, Clinical Teaching Fellow, Medical Education Department, Royal Infirmary of Edinburgh, 51 Little France Crescent, Edinburgh EH16 4SA

Background and Purpose
‘Postgraduate & Undergraduate Learning in the South East’ (PULSE) is a regional programme in Scotland where doctors in training deliver clinically relevant educational sessions to medical students. This near peer programme aims to empower junior doctors, creating a culture where education is prioritised.

We support and develop PULSE faculty, offering them a 2-hour ‘Impromptu Clinical Teaching Workshop’ during their induction, as part of the Clinical Educator Programme (CEP), which provides formal accreditation of teaching. Despite great enthusiasm and attendance at these voluntary evening inductions, 180 doctors in 2014 and 205 doctors in 2015, this has not translated into actual delivered sessions for medical students.

Despite significant work to develop an infrastructure to assist junior doctors in organising and delivering sessions as part of this programme we have been challenged by lack of engagement. We wanted to explore what motivates junior doctors to become part of formal education programmes and identify factors that help translate this initial enthusiasm into action in these voluntary programmes.

Methodology
Utilising focus groups of junior doctors from a cross section of levels and a mixture of current faculty and non-faculty, we will explore the motivating factors and perceived barriers of both of becoming part of a formal educational programme and in actual workshop delivery to the medical students. Focus groups will be recorded, transcribed and coded to assist with identification of key themes.

Results
A mixture of quantitative and qualitative results will be presented with demographic data about study participants and more in depth data about perceived motivating factors and challenges to programme delivery. An initial pilot focus group has revealed some issues with signposting of logistical information for trainees and challenges with engagement from medical students leading to a cycle of demotivation for both parties particularly given the voluntary nature of this programme.

Discussions & Conclusions
The researchers will identify the key perceived barriers and motivating factors that will help to convert this initial enthusiasm from the trainee body into actual delivered sessions to medical students for the benefit of the trainees, to develop themselves as clinical educators, and for value added education for medical students. By understanding what drives our faculty we will be better equipped to support and develop them which in turn will lead to a better educational experience for our medical students.

Improving differences in achievement in medical students: insights form the literature

P Vivekananda-Schmidt, J Sandars
P Vivekananda-Schmidt, Sheffield Medical School, S10 2RX.

Background and Purpose
We previously published work investigating self-reported factors affecting academic performance amongst ethnic minority and Caucasian medical students. The data from this study indicated that ‘lack of belongingness’ is a key factor affecting academic performance(1); ethnic minority medical students are less likely to feel a sense of belongingness in the medical school community due to cultural differences(1). Belongingness can be defined as the potential match or mismatch between the student’s background and the institution(2) and it is closely related to and contributes to identity development(3).

Method
A scoping review was conducted that included healthcare education and the wider educational literature to identify the role of belongingness for learner development. The literature search was conducted through google scholar, PubMed and Eric databases. All articles which contained the key words ‘belong’, ‘belongingness’, or ‘belonging’ in the title or abstract of the article were included in the initial screening. Only the following articles were included in the review: (1) the focus was on developing learning, academic performance, learner well being or the learning environment; (2) articles that focused on data driven (this included review articles or data from document analysis) evidence for improvements(2, 4-7). The articles included consisted of secondary or higher education focus.

Findings
Nurturing a sense of belonging is key to developing students who have a strong identity as successful learners (Parkes, 2014), perceptions of belongingness also nurtures positive mental health(8) and improves retentions rates(2). Staff-student relationships are key to students’ experience of belongingness(2). Understanding the types of interactions and behaviours that facilitate students’ belongingness are essential to the creation of positive clinical experiences(9). Even though minority students are less likely to feel that they belong and may benefit even more from interventions to nurture belongingness(4, 6), nurturing belonging was important for the academic and general well being of learners(7, 10-12).

Conclusions
Currently there is little work to inform us about the role of belongingness within medical education environments and how best to develop interventions that nurture belongingness within medical education learning environments. The literature indicates that this is an important task in light of the growing diversity of the medical student population.

Inter-professional Education
Dare to NHS: Widening Participation into Healthcare through Simulation

R Holman, A Woodman, M Natarajan, K Jones, S Canning.
R Holman, Clinical Teaching Fellow, Undergraduate Academy, Great Western Hospital, Swindon:

Background and Purpose
It is recognised that candidates applying for careers in healthcare should come from diverse backgrounds. Currently however, there is under-representation of students from certain ethnic, social and economic circumstances within this setting. Work therefore is still needed to encourage the aspirations of these students and raise awareness of the opportunities available to them. The ultimate goal of recruitment onto healthcare undergraduate courses is to enrol students purely on their own ‘merit, ability and motivation and not because of their social background or the privilege, extent and effectiveness of their social networks.’

With this in mind, we have developed a novel widening participation initiative at year 9 students from the local area, who, perhaps have not considered potential careers options but, crucially have not yet selected their GCSE subject choices, which could limit their eligibility for certain healthcare courses in the future.

Methodology
A simulated scenario following a patient on their journey from the site of a traumatic incident in the community to hospital is unveiled as the patient is picked up and assessed by paramedics, before being transferred to the emergency department, theatre and then finally to the ward. Along the way a variety of professionals are encountered, with the aim of exposing the students to the array of professional groups involved in patient care.
This has been expanded from 2015 to include a group of 21 students from three different local schools that will be recruited to attend this event.
Following the scenario, the professionals involved form a panel and discuss their careers followed by a Q&A session. Healthcare professions involved will include; paramedics, nurses, theatre staff, doctors, surgeons, midwives and physiotherapists.
On completion of the session, the students will fill out a ‘before and after’ questionnaire, with the aim of eliciting their knowledge of healthcare professions and their interest in perusing a related career prior and following the event. This will then be followed up in future years, with a comparison to be made to the previous event in 2015.

Results
We would like to show the video/film of the simulation from July 2015.

Conclusion
Simulation is an exciting and novel way of widening participation into healthcare professions. It forms strong links with the local community and will hopefully inspire the next generation of local students into health professions in the NHS.

References
End of life care simulation for a multi-disciplinary undergraduate team

YYS Ho, D Morton, H Chant, N Oxlade, L Crossland, C Earnshaw, Z Hossenbaccus, J Hawkins, CD Rodd.
YYS Ho, Redwood Education Centre, Gloucestershire Royal Hospital, GL1 3NN

Background and Purpose
In the United Kingdom, the majority of patients die in the hospital environment and all healthcare professionals are required to be competent in the management of the dying patient. However, the training and exposure in this area is variable both between and within professional groups. Nursing and medical students from a London University felt there was a lack of opportunity to discuss issues surrounding end of life. The National Care of the Dying Audit recommended joint training for members in the multi-disciplinary team. This study explores the attitudes and experiences of pre-registration pharmacists, nursing, and medical students’ who participated in an inter-professional end of life care simulation training.

Method
Pre-registration pharmacists, nursing and medical students were invited to attend a simulation session on end of life care management issues. Each group of participants received two scenarios with a faculty member portraying the patient’s relative and a patient simulator (Gaumard). The first scenario involved pain management and use of anti-emetics in palliative care. The second scenario was based on agitation and excess secretions management.

A questionnaire using a Likert scale and free text answers was administered pre and post simulation. It explored the participants’ previous palliative care experience and IPE, perceived confidence on end of life issues and whether stress is associated with IPE simulation. Facilitated debriefing was used to support the students’ reflection and discuss any changes to their future practice regarding end of life care management. The perceived benefits to the students; enjoyment, and non-technical skills were also discussed. Ethical approval has been granted to perform this study.

Results
Results on the role of IPE simulation for teaching end of life care will be presented.

Discussion
The World Health Organisation and professional councils have long emphasised the importance of inter-professional education (IPE). Studies have suggested IPE may improve patient outcome and increase perceived clinical competence by enhancing communication and team working skills. Pharmacy students had rated higher perceived competency following end of life care simulation training. Using IPE simulation to teach end of life care is novel and may be able to provide the students from all disciplines with a more standardised experience of palliative care.

References
Improving awareness of the management of issues within women’s health

K Else, J Moffatt, K Jones
K Else (kayleigh.else@gwh.nhs.uk), Clinical Teaching Fellow, Undergraduate Academy, Great Western Hospital, Marlborough Road, Swindon, SN3 6BB

Background
The prevalence of sexual assault, domestic violence, female genital mutilation (FGM) and forced marriage is far greater than many recognise. 1 in 4 women are sexually assaulted during their adult life\(^1\), 4.6 million women in the UK have experienced domestic abuse and on average 2 women a week are killed by their current or former partner\(^2\) and in addition 66,000 women in the UK live with consequences of FGM\(^3\). Mandatory reporting of FGM in the under 18s introduced in 2015\(^4\) highlights the importance of wider understanding among health care professionals.

These topics are not routinely incorporated into undergraduate or postgraduate medical curriculums and are not currently part of mandatory training. We have attempted to address this gap in education in the belief that, an awareness of these issues could improve the care of many women. A previous workshop held within our trust which focussed on sexual assault was very successful at improving awareness and confidence among staff\(^5\).

Methods
A one day multidisciplinary workshop was organised with specialist speakers recruited to address each of the key topics. A questionnaire was given to participants before and after the workshop to determine the effectiveness of this educational intervention. This assessed both level of knowledge and confidence in dealing with these issues in a clinical setting using a 5 point Likert scale.

Results
Knowledge of each of the four topics was shown to be improved. The average knowledge score following the study day was 4.08 compared to 2.8 prior to the course (p=<0.01). A similar increase in overall confidence was also demonstrated with an average score of 2.21 prior to the teaching and 3.71 following the session (p=<0.01).

Discussion
A wide variety of health care professionals look after women that have been subjected to sexual assault, domestic violence, FGM and forced marriage. These women may have specific health needs acutely and in the longer term, which needs to be acknowledged. The success of this workshop has emphasised the need for further education in these areas. We plan to repeat this workshop in 6 months time.

References:
Introduction of an educational program for care home workers

L Jeyalingam, S Perera, J Williams, C Etherington, C Wills, C Szasz
L Jeyalingam, lukshmy84@gmail.com

Background
A number of agencies are involved in provision of residential home care including GPs, local acute trusts, community pharmacists, London Ambulance Service and palliative care teams. However dedicated training and supervision for care home workers is lacking. We aimed: 1. To introduce narrative reflective learning for residential home care provision 2. To strengthen the networks between the different providers involved in care homes. 3. To increase the education and confidence of care home workers and for this to enhance satisfaction in one’s work.

Methods
We introduced a two phase educational programme for residential healthcare workers in our Clinical Commissioning Group (CCG). In phase 1, we delivered a Balint Group, narrative facilitated discussion on sharing emotionally challenging experiences .During these sessions we identified a number of clinical topics that care workers identified as learning priorities. In Phase 2, we delivered 4 whole days of training sessions on these topics alongside the narrative groups. Written feedback was obtained following all sessions.

Results
Phase 1 was delivered to 23 healthcare workers in 4 care homes over seven 2-hour weekly sessions. Feedback was obtained from 21/23 participants. 91% reported that it was useful to discuss stories of residents. 78% reported that it was useful to learn about themselves, 87% reported that it was useful to learn about colleagues, 100% reported that they felt more prepared to carry out their duties

The topics for which learning needs were identified was delivered in Phase 2 included: Wound Care, Managing Challenging Behaviour, End of Life Care and Reducing Falls. Following Phase 2, a course manual and web-based toolkit was developed to disseminate the skills and knowledge gained during this project with other CCGs.

Conclusion
We successfully delivered an multi-disciplinary educational program for residential care home worker. The group discussions also highlighted specific issues where participants felt that they would benefit from further training such as end of life care and supporting residents with challenging behaviour. We provided the participants with an opportunity to reflect on the work they do and gave them an emotional outlet for anxieties and frustrations generated by their work. Participating in narrative groups enables care home workers and managers to appreciate their own values, the dedication and value of workers in other related disciplines and improve their work and working environment extremely beneficial. This is likely to result in improved patient care and staff morale.
Making a difference: a qualitative study of an inter-professional social engagement project

RG Ayres, RA Carter, SAG Stevens
RG Ayres, Senior Clinical Lecturer, Plymouth Peninsula Schools of Medicine & Dentistry. John Bull Building, Tamar Science Park, Plymouth, PL6 8BU

Background and Purpose
It is increasingly recognised that medical schools have a duty to the communities that they serve\(^1\) and that there are many benefits in student social engagement within those communities\(^2\). There is also ongoing interest in the value of inter-professional working\(^3\). Social engagement has many forms, and benefits to students are likely to be multi-faceted. We chose to use a previous classification of social engagement into community-orientated, community-based and community engaged education\(^4\). We used a conceptual model of benefit derived from the work of Maclntyre\(^5\). In this model, engagement is seen as a “practice” that brings benefits to both students and patients in the form of “internal and external goods”

Methodology
The project provided 1) interdisciplinary attachments for student volunteers from medicine and nursing disciplines to 3 community-based providers and 2) An opportunity for students from 10 healthcare disciplines to collaboratively run a whole day health promotion event at a health facility in an area of high social deprivation.

Extensive qualitative data from student diaries, interviews with students and staff and focus groups were collected and analysed thematically.

Results
Students gained new insights, knowledge and skills arising from both the community experience and from working with different disciplines. They were able to contribute in diverse and sometimes unexpected ways. A number of “internal goods” such as development of deeper relationships, communication of feelings, breaking down of class and professional barriers resulted.

Discussion and Conclusions
The 2 components of the project provided different but complementary experiences. It is clear from the data that students enjoyed the often new experience of working with peers from other disciplines. They also enjoyed, but were greatly challenged by, working with service users with multiple and complex needs (such as when they were placed with providers working with homeless persons). There was strong evidence of new learning and clear examples of change of practice resulting from these experiences. We considered that the project provided mostly community-based but some community-engaged experiences. Philosophically, sending healthcare students into communities represents a radical change of practice for medical and nursing schools and the “Maclntyre” model provided a very useful conceptual framework for understanding the process, as well as the outcomes that can be achieved. Further work is ongoing.

References
3. Sheree J. Aston, OD, PhD, Wendy Rheault, PT, PhD, Christine Arenson, MD et al. ,Interprofessional Education: A Review and Analysis of Programs From Three Academic Health CentersAcademic Medicine, Vol. 87, No. 7 / July 2012
Paramedic and medical student simulation: An example of multidisciplinary debrief

J.E. Hambidge, J. A. McDonald, K.A Else, A. Woodman
J.E. Hambidge, Swindon Academy, Great Western Hospital, Marlborough Road, Swindon, SN3 6BB

Background
The General Medical Council (GMC) states in Tomorrows Doctors 2009 that medical students should “learn and work within a multi-professional team”. Simulation has become a staple in medical student education and a thorough debrief is an integral part of this. We believe that the GMC’s statement should apply to as many educational concepts as able. Previous groups (Moyer 2011) have discussed the role of multidisciplinary group teaching, however none so far have analysed students perceptions into its efficacy.

Proposed method
Using the simulation facilities and hospital grounds at the Great Western hospital in Swindon, we will be offering half day simulation sessions to paramedic (n=6) and medical students (n=6). This will be on a voluntary basis and we plan to run this on four occasions between February and May 2016. Each session will include two emergency scenarios (trauma and cardiac arrest) which will be repeated in each session. These will consist of a pre-hospital component with continuation of the scenario in the simulated Emergency Department (ED). Two paramedic students and two medical students will be expected to participate in each individual scenario. We envisage the paramedic students actively participating in the initial management, extrication and transfer. On arrival in the simulated ED, handover of the patient will occur and management will continue with both medical students and paramedical students participating.

Each debrief will be run by both medical and paramedical seniors but will incorporate feedback from all students not actively involved in that particular scenario also. This will enable all students to receive feedback from a multidisciplinary view point during the course of the half day.

We intend to collect data from a total of 48 students in the form of a questionnaire with a supporting focus group style discussion. These will be completed at the end of each half day. The questions asked will focus on whether the students felt there was added benefit from having other healthcare professionals present and contributing towards a debrief and whether they felt any added input was positive or detrimental to debrief discussions.

This data can then be used to guide the format and style of future multidisciplinary simulation debriefs.

References
GMC 2009. Tomorrows Doctors p27
‘Going the extra mile’. Critical discourse analysis of the power of patients and doctors

C Ho, S Roy, T Dornan
C Ho, Medical Student, Centre for Medical Education, Queen’s University, 97 Lisburn Road, Belfast, Northern Ireland BT9 7BL

Background and purpose
Doctors are powerful people. Learning to be a doctor, therefore, draws students into the power dynamics of the medical profession. The abuse of power can adversely affect medical education but we found that the virtuous exercise of power can also have positive effects on medical students’ identity development. Macleod characterised medical students’ learning as a tension between competent and caring identities. The aim of this research was to gain further insight into the complex dynamics of competence, caring, and power by exploring how medical school faculty construct the position of doctors relative to patients.

Methodology
The setting was a single UK medical school. Following the critical tradition, the methodology used discourse theory and analytical tools described by and . With research ethics approval, we used a maximum variation sampling strategy to recruit 10 junior and senior, male and female, clinical and non-clinical faculty, varying in ethnicity and specialty. In semi-structured interviews, we used non-directive prompts to explore their spoken discourses of doctors, patients, and the interrelationships between them in clinical practice, then specifically asked participants to comment on the relative status of doctors and patients. We worked collaboratively and reflexively to identify relevant utterances. We used Gee’s linguistic tools to explore how spoken discourse constructed higher level Discourses, which wielded power.

Results
A discourse of competence gave most agency to doctors, who know what is for the best and have technical skills and tools (such as drugs) to heal patients. A discourse of caring was framed in terms of emotional aspects of care, allowing more space for patients to have agency. Several participants used the metaphor of ‘going the extra mile’ to characterise competence as essential, and caring as optional, which linked power with doctors’ technical attributes. Struggle was apparent in participants’ statements that clinical practice is being adversely affected by the increasing power of patients, and societal expectations.

Conclusion
This research is innovative in several respects. It uses a novel critical discourse methodology, sitting between traditional linguistic approaches and analysis. It faces up to an elephant in the medical school room: power. And it explores positive as well as the more familiar negative aspects of power. The findings open up a conversation about how understanding and expressing different discourses of power could have beneficial effects on medical students’ identity development.

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Doctors' and Patients' Differing Perspectives of Early Patient Contact

M Corr, G Roulston, R McCullagh, K McGlade
K McGlade, Centre for Medical Education, Queen’s University Belfast

Background
Early Patient Contact (EPC) in the community has many benefits and is now extensively used in medical education.¹ Although student satisfaction is widely reported,²,³ the impact on patients, which is of concern to general practitioners (GPs) who facilitate such schemes, remains underrepresented in the literature.⁴,⁵ The study aimed to examine in depth the impact an EPC has on patients, and to compare and contrast their views with those of the GPs involved.

Methods
Qualitative study involving student interviewers and experienced faculty. A constructivist approach was adopted and template analysis⁶ employed to organise the data into themes. GPs and patients who previously participated in an EPC scheme were invited to participate in the study. Individual semi-structured interviews were carried out with 13 GP tutors in their surgeries and 27 patients in their own homes. A two stage analysis was employed. Firstly student interviewers carried out preliminary content analysis, using NVivo software, in parallel with data collection. Along with field notes and constant comparison this preliminary content analysis allowed for iterative interview question refinement. The second stage, once data collection was complete, involved all authors. Individual coding was followed by round table discussion guided by a template analysis framework resulting in derivation of hierarchical themes.

Results
Four top-level themes emerged: (1) How Doctors View Themselves; (2) How Doctors View Patients; (3) How Patients View Themselves; (4) Patient Curriculum and Empowerment. Whilst supportive of the scheme, family doctors did experience certain unease with respect to their responsibilities to both students and patients. Doctors underestimated the beneficial impact an EPC programme can have on their patients. However patients felt meaningful benefit from participating in the EPC scheme. They appeared to have a great enthusiasm to assist the students, and were particularly invested in their students' success in assessment. In fact, some patients motivated by personal experience had their own learning agenda for their students.

Discussion
This study provides insight into patients' and doctors' experiences of EPC including motivation, benefits, barriers, and concerns. It provides some reassuring evidence to those doctors who worry that they may in fact be compromising their own therapeutic relationship asking patients to take part in medical education. In fact, patients can be highly motivated teachers empowered by responsibility. This study raises the question of more active-involvement of patients in medical education, and the promotion of patient-centred learning.

References
Inpatients’ experience of medical education: a blessing or a burden?

J Hollamby, J Morgan,
J Hollamby, Clinical Teaching Fellow, North Bristol Academy, University of Bristol Medical School, Southmead Hospital, Bristol, BS10 5NB

Background
The inpatient journey is difficult to understand without experiencing it first-hand. A friendly medical student may be a welcome break from the monotony of ward based life however it is important that patients are empowered to interact with students as they feel able. The ways in which the medical students interact with our inpatients is partly determined by the curriculum set for them.

Aim
This study will examine and evaluate the inpatient perspective of being interviewed and examined by medical students.

Method
Qualitative and quantitative data will be collected in the form of a patient questionnaire. Two patients on each of the thirteen medical and nine surgical wards in North Bristol Trust will be surveyed according to the following selection criteria: current inpatient, capacity to participate in the study, agrees to participate in the study, and has not completed the questionnaire before. Patients satisfying the above criteria will be chosen according to their bed numbers using a random number generator. Questions have been designed to examine the following issues: would the patient be happy to see medical students and why, how long would they be prepared to spend with a medical student and would they felt able to close the encounter prematurely should they wish? Patients will be asked whether they have been seen by a medical student during their admission and offered the chance to provide free text comments regarding any personal experience or opinions.

Results
At time of submission to ASM, results not yet obtained. Data collection is due to be completed by February 2016.

Discussion and Conclusion
The results of the study are expected to provide insight into reasons patients agree to see medical students and give an indication of the time that patients are generally prepared to spend with them. This study may provide guidance to make patient-student interactions more effective in the future.
The Attitudes of Medical Students to Feedback from Patients

C M S Pye, D Hunukumbure, S Das
C M S Pye and D Hunukumbure Clinical Teaching Fellows, Hillingdon Hospital NHS Foundation Trust and Honorary Lecturers, Imperial College London.

Background and Purpose
The GMC advises that doctors collect multisource feedback, including feedback from patients, as part of their appraisal(1). Multisource feedback can improve doctors’ behaviours and attitudes through reflection(2). In the same way, medical students can benefit from this approach. The BMA advises that patients should play an important part in the teaching and assessment of medical students(3).

The Patient Feedback Teaching Project was introduced to third year medical students at Hillingdon Hospital in September 2015. Students are given questionnaires inside envelopes and are asked to collect feedback from patients. The patient questionnaire comprises of open and closed questions on the students’ professionalism and communication skills. The sealed envelopes are collected from the patient and fed back to the students in a teaching session. Little is known about the students’ perception on patient feedback. Our research aims to explore the students’ attitudes before and after collecting patient feedback.

Methodology
The research will commence in February 2016. Two questionnaires that include free-text and likert scales will be used for data collection. The questionnaires will be given out prior to collecting the feedback and after the debrief session.

Results
The results will be analysed after the data is collected. The data presented here is from an evaluation of the teaching programme done in November 2015. 31/38 collected patient feedback and all student evaluation questionnaires (completed after the exercise) were returned. 30/31 indicated they valued patient feedback. 16/31 felt comfortable asking the patients for feedback. 26/31 gave the patient feedback a positive learning value.

Discussion and Conclusions
Themes from the evaluation included it was an incentive do to more clinical work and insightful to know what the patients thought of them. Worries included struggling to find ‘good patients’ and concerns about asking patients to complete this task. In contrast to our students concerns, studies have shown patients have a positive attitude to helping with medical student teaching(4, 5). It was suggested the questionnaire should allow for more patient comments, as these were most useful and that having a different healthcare professional collecting the feedback form may increase honest patient feedback. The evaluation suggests patient feedback is an acceptable and effective learning technique to encourage self-reflection of professionalism and communication skills. In July 2016 we look forward to presenting the results of our completed research.

References
What does it mean to be caring? Scoping literature review

H Gillespie, M Kelly, S Duggan, H Ganshorn, GJ Gormley, T Dornan
H Gillespie, Medical Student, Centre for Medical Education, Queen’s University Belfast, 97 Lisburn Road, Belfast, Northern Ireland BT9 7BL

Background and Purpose
Medical students and residents learn to care for patients. But what is caring, and how should people learn to care? According to Bleakley and colleagues¹, patients have a minority voice in a research landscape dominated by authority and ‘expert’ opinion¹. They envisioned an educational landscape, with patients and their needs at its centre. For that vision to become reality, educators need to know how patients experience being cared for. We set out to answer the question: “What is known about patients’ experiences of being cared for in healthcare settings?” by synthesising conclusions from existing evidence.

Methodology
This scoping review followed Arksey and O’Malley’s 5-step approach. Step 1: we framed the above review question. Step 2: we developed and progressively refined a search strategy, applied it to 6 online databases, selected articles, and hand-searched their bibliographies. We excluded articles not in English but placed no other restrictions on date, context of care, or caring profession. Step 3: We reviewed: 2290 titles/abstracts to identify research, which explored patients’ experiences; 212 relevant ones in full text; and 20 ones, which met inclusion criteria. We used the CASP toolkit³ to appraised their quality. Step 4: we extracted data, which allowed us to complete the sentence “this piece of research shows that a patient would feel (un)cared for if (s)he experienced …”. Step 5: we collated the findings in a spreadsheet, inductively coded them, and developed an interpretive framework.

Results
Patients felt cared for when professionals:
- Demonstrated attributes like genuineness, sincerity, friendliness, and optimism. Caring professionals were emotionally responsive, competent, and had good personal hygiene.
- Communicated by means of open, inclusive dialogue. Caring communication included talking, listening, sharing knowledge, and communicating non-verbally
- Formed relationships with patients and their families, treated them as individuals, and created a sense of connectedness.
- Were ‘present’; accessible, ready, and emotionally near.
- Managed care proactively, holistically, and centred on patients. Caring professionals alleviated suffering by taking patients’ concerns seriously and thinking ahead.

Discussion and Conclusions
There is an evidence-base, albeit small, which sketches out a truly patient-centred landscape of caring. Many simple, practical clinical behaviours contribute to the sketch. These are often neglected in the erudite climate of medical schools yet clinicians can easily model and encourage them in clinical placements. We already have Arksey and O’Malley’s optional sixth step - directly asking patients to add detail to this preliminary sketch – under way.

References
Postgraduate Education
A programme for overseas doctors: A realist evaluation

A Kehoe, J Illing, J McLachlan, S Forrest, J Metcalf
A Kehoe, Durham University, School of Medicine, Pharmacy and Health, Room E113, Wolfson Research Institute, Durham University Queen's Campus, Stockton-On-Tees, TS17 6BH

Introduction
The UK’s National Health Service (NHS) relies on overseas medical graduates (OMGs) to ensure effective healthcare delivery. However, concern has grown around the regulation and professional practice of those qualified overseas. Research suggests that overseas doctors are likely to face difficulties with communication, culture, practical issues, team working and hierarchical structures. A multitude of recommendations have been made concerning support for OMGs; however, there is no clear indication as to the nature and extent of support required to aid in their transition.

Objectives
This research seeks to understand i) how programmes set up to support OMGs enable them to make a successful transition to the UK and ii) what mechanisms trigger successful outcomes and in which contexts.

Methods
Following the findings from a realist synthesis, a pilot Programme for Overseas Doctors (POD) was developed within one North East Trust. The programme provided both experiential training opportunities and a support system. The programme was primarily aimed at doctors new to the Trust who had gained their medical degree overseas. A realist evaluation was conducted across two years using a multiple case study design. A total of 100 interviews took place. Participants included programme attendees (OMGs), supervisors, ‘buddies’ and OMGs who had experienced no intervention (3 months and one year after programme). Pre and post questionnaires were distributed and performance data collected. Data was analysed and interpreted to refine programme theories.

Results
Three contextual levels were found to impact on adjustment: individual factors (e.g. expectations), training factors (e.g. ongoing support and role modelling) and organisational factors (e.g. cultural awareness). Psychological mechanisms triggered included self-efficacy, social capital, motivation, insight and acculturation. Educational mechanisms included preparedness and professional growth. Evaluation of the first cohort led to developments of POD for the second cohort, including the implementation of enhanced supervision, an initial needs assessment, earlier and longer induction (spread across weeks), use of previous POD attendees and a better recruitment process. Performance data highlights the importance of such a programme for OMGs.

Conclusions
The results support and develop the framework proposed by the initial realist synthesis. The implementation of an enhanced induction programme (including experiential training opportunities and needs assessment) and ongoing support (peer/supervisor) is needed. The necessary individual, training and organisational contexts must be in place and working together in order to improve OMG transition. Feeling welcomed and supported is critical to adjustment. A list of recommendations for implementation are given.
A Troubling Transition: What factors influence Core Medical Trainees when applying for Acute Registrar Training?

L P Steele, M Holdway, P Fletcher.
L P Steele, Postgraduate Clinical Teaching Fellow, Department of Postgraduate Medical Education, Gloucestershire Hospitals NHS Foundation Trust, Sandford Education Centre, Keynsham Road, Cheltenham. GL53 7PX

Background
Applications for higher medical training are falling with a significant number of posts left unfilled. This is particularly evident in the training programmes which involve contribution to the acute medical take.¹ A fall in trainee applications coincide with increased patient numbers presenting to emergency care and leaving a gap in service which makes patients and the NHS extremely vulnerable.

A survey conducted by the Royal College of Physicians in 2013 indicated that 44% of trainees did not feel prepared to become a medical registrar after Core Medical Training.² If we could establish why then we may be able to offer a solution to the current recruitment crisis.

Purpose
The purpose of this study was to determine which factors trainees considered important when applying for further general medical training in acute medical specialties.

Method
The interview format consisted of three types of questions (start up, expanding and “back on track”) which were externally validated and considered to be unbiased. A group of core medical trainees were interviewed by two researchers. Verbal consent was obtained from the participants. The interview was recorded on a Dictaphone and a backup digital audio recording.

The interview was transcribed verbatim and given to each of the researchers. The researchers used process coding independently to identify key themes in the transcript. These themes were then put together under the categories of knowledge, skills, attitudes, solutions and other. A word map was constructed from the common themes.

Results
The category with the most themes identified was overwhelmingly attitude. Forty seven responses were recorded in this category versus 9 for knowledge, 19 for skills, 5 for solutions and 5 for others. Within the attitude category the most commonly identified concern related to confidence (25/47). 12/47 responses related to feelings of anxiety about running the acute medical take.

Discussion
The results of this study suggest that it is not lack of knowledge or practical skills that core medical trainees fear when becoming medical registrars but the lack of confidence when having overall responsibility for running the acute medical take. There is also a significant level of anxiety which may also influence a trainees’ decision to apply for further training. If there was a way to improve trainee confidence in running the acute medical take this may also reduce anxiety and improve application numbers for further acute medical training.

References
Accommodating changing career intentions in training pathways - more flexibility needed?

P Kavanagh, S O'Hare
Dr Paul Kavanagh, Director of Professional Development and Practice, Medical Council Ireland, Kingram House, Kingram Place, Dublin 2, D02 XY88

Background and Purpose
Robust information from trainees on their career intentions might alert educational planners to potential shifts in demand for specialties and help make healthcare planning (and training) more effective. The Irish Medical Council (the regulator of doctors in Ireland) asked trainees about their career intentions as part of its National Trainee Experience Survey, Your Training Counts.

Methodology
Your Training Counts included 3 questions on career intentions. Responses to these items were analysed with a range of personal characteristics (e.g. trainees’ age, gender), contextual factors (e.g. what type of site they were located in), and other items in Your Training Counts (e.g. experience of bullying) to look for significant variations, or associations, in how trainees responded.

Results
2 in 3 trainees were definitely sure about the specialty in which they wanted to practice for their long-term future. Trainees who were sure about the specialty for their long-term career tended to report more positive views on their learning environments, greater quality of life, better wellbeing, and greater work engagement than other trainees.

Expressing an interest in having a significant change in speciality wasn’t exclusive to trainees who had just begun training; 22% of trainees in Basic Specialist Training programmes and 14% of HST trainees expressed an interest in changing specialty.

21% of trainees in surgery related specialities wanted to move to a medicine related speciality, and 5% of trainees in a medicine related speciality wanted to move to General Practice training.

Trainees in GP practices (2%) and mental health services (4%) were significantly less likely to want to change specialty than trainees based in hospitals.

Discussion and Conclusions
The majority of trainees are sure about the specialty in which they wish to practise for their long-term career, however, almost a third of trainees are not. Trainees who aren’t sure about their career pathway report a lower quality of life, lower work-engagement and poorer wellbeing than those who are. Experiencing high quality learning environments is strongly associated with greater surety about long-term careers.

Trainees who wanted to change the specialty of their career path were significantly more likely to express an intention to practise outside of Ireland. Would greater flexibility in training structures also bring some modest success in terms of trainee retention?
An Evaluation of an Education Intervention that Employs the use of Patients to Teach Values and Behaviours to Junior Doctors

K Best, F Protts, R Aspinall, S Redwood
K Best, Clinical Teaching Fellow, Medical Education (PGME), UH Bristol Education & Research Centre, University Hospital Bristol NHS Foundation Trust, Bristol BS2 8HW

Background and Purpose
Striving to achieve a workforce that is adequately accomplished to provide a world-class quality healthcare service that promotes good outcome for patients, the Department of Health has lobbied for a reformation in the education, training and development systems of the Healthcare workforce¹. Through this, the Education Outcomes Framework (EOF) was established to provide a platform that offered specific domains for the development of high-level professional standards.

One of the five EOF domains encompasses the values and behaviours of the NHS workforce as it relates to providing positive patient experiences. These values and behaviours objectives are also specified in the junior doctor curriculum². However, they receive little emphasis and are rarely taught during the foundation years.

The importance of developing interventions that instil good values and behaviours has been echoed through evidence from several studies which suggest that an excess of 30% of patient complaints are directly related to undesirable staff behaviours and poor communication³⁻⁵.

It is recognised that values and behaviours are difficult and complex attributes to teach. However, the idea of patient involvement in the influence and enhancement of outcomes as well as in humanising health care is increasingly becoming an essential tool in practitioner education⁶.

This educational intervention aims to qualitatively assess the impact of employing the use of patients discussing their healthcare experiences with Foundation year 2 (FY2) doctors to promote the acquisition of values and behaviours that are patient-centred.

Methodology
FY2 doctors were invited to attend one of two 2 hour sessions that were structured around 3 ‘real’ patients delivering personal stories of their experiences of care through healthcare services. Facilitated group discussions and questions and answers between doctors and patients were employed throughout the session. Qualitative data was being collected at two time points; firstly, soon after the intervention itself via a semi-structured interviews and secondly, 3 months later via individual written reflections.

Initial Results
Preliminary results from ongoing interviews showed that participants found the session valuable as it reiterated important concepts that were briefly covered in medical school but were never formally addressed during their foundation years. Feedback also showed that there was a generalised heightened awareness of the impact values and behaviours had on their patients’ experiences. With this, a significant portion of the doctors interviewed expressed that following the session they were more cautious in their approach to patients and made a conscientious effort to be more sensitive to patients.

References:
2. UKFPO. The UK Foundation Programme Curriculum. 2012, updated August 2015. Available at: http://www.foundationprogramme.nhs.uk/pages/foundation-doctors
Assessing the Impact of Implementing a 7 day Working Pattern on the Learning Opportunities and Wellbeing of Trainee Doctors

E Hampton, R Hallows, H Monaghan, S Edgar
E Hampton, Clinical Teaching Fellow, Medical Education Department, NHS Lothian, Edinburgh, Scotland.

Background and Purpose
Optimising training to deliver safe and effective healthcare can be challenging. Following the unfortunate death of a young medic driving home following a night shift the Chairman of the Academy of Medical Royal Colleges called for a rethink of the workload placed on junior doctors\(^1\).

The Scottish Executive have responded to this call and are introducing policy to ensure trainee doctors are not working for more than 7 consecutive shifts. The implementation of this policy comes into action in February 2016. NHS Lothian has been proactively implementing this policy. We wanted to explore the impact of the new rota pattern on junior doctors opportunities for training, patient safety and wellbeing to identify practical ways to support and develop our trainees.

Methodology
The survey was developed using the key areas identified in a report for the GMC entitled ‘The Impact of the Working Time Regulations on Medical Education and Training: a Literature Review’ as a framework\(^2\).

Using the online platform of ‘Questback’ we sent the survey to all trainees working in NHS Lothian prior to implementation of the 7-shift working rule and after it had been fully enacted. We also sent an adapted survey to the Clinical Directors to gage their perceptions of the impact on trainees within their directorate. The data was then coded and emergent themes identified.

Results
We had 117 responses to the initial survey, 219 to post implementation and responses from 20 clinical directors. 83% of trainees surveyed were scheduled to work for less than 7 consecutive days compared with 30% prior to the implementation of the new policy.

The key factors that trainees perceived to have the greatest impact on their opportunities for both formal & informal learning in the clinical environment were ‘Rota Construction’, ‘Workload’ and ‘Culture’. Although there were some minor improvements following the implementation of the 7 shift working pattern the core themes and challenges remained static.

Conclusions/Discussions
Overall we have seen positive improvements in compliance with the new rota policy. However although a slight improvement to more available learning opportunities there remain significant challenges with more complex underlying drivers than purely rota construction that are impacting trainees’ learning opportunities and their ability to perform at perceived optimal levels.

Clinical Handover: from theory into practice. A novel simulation-based handover training day

C Hogan, I Pankhania, J Siah, A Khaku, C Curtin, P Walker, E Smithers, K Amin, P Ramnanan, A Choudhury
C Hogan Barking, Havering and Redbridge University Hospitals NHS Trust

Introduction
Following the implementation of the European Working Time Directive, shift work within the NHS has become commonplace amongst acute healthcare providers. We are therefore increasingly dependent on clinical handover to ensure safer patient care. Yet the National Patient Safety Agency describes the act of handover as ‘one of the most perilous procedures in medicine’. In 2014, the I-PASS study showed that implementation of a multifaceted ‘handoff-bundle’ - which included an hour of handover simulation training, reduced the rate of preventable adverse events by 30%. We have developed an innovative simulation-based course to address both the human factors and system failures during handover that can lead to these preventable medical errors.

Aims
1. Identify best practice in handover literature.
2. Utilise simulation to promote candidates’ understanding of the human factors that can contribute to poor quality handover.
3. Develop candidates’ knowledge and confidence to lead change in their local departmental handover.

Method
The day involves a mixture of education methodology - lectures, a workshop, four simulated handover scenarios and an IT handover training session. We have run the course three times - a total of twenty-five candidates from multiple regions. The simulated handover meetings involve candidates being split into an ‘out-going’ and an ‘in-coming’ team, with the remainder of candidates watching via video-link. The scenarios each introduce unique stressors to elicit human factor failures and are followed by a debriefing session.

Outcome
Post-course questionnaires revealed that 100% of candidates thought that attendance will directly lead to an improvement in their ‘clinical practice and patient care in relation to handover’. Linked pre- and post-course Likert scales demonstrated that candidates felt more confident to contribute to (56%) and lead (60%) handover meetings. 60% also felt more confident to lead a change of practice at their current trust. Follow-up questionnaires were later sent to candidates. 100% agreed or strongly agreed that their ability to participate in handover has improved since attending the course. Two of the candidates wrote that due to the course they are leading change in handover at their local trusts – a quality improvement project, a handover checklist and handover quality monitoring programme.

Conclusion
This simulation course provides training in an under-developed area of medical education. It is an effective and well-received method of improving candidate’s learning and behaviour with regards clinical handover. There is early evidence that this knowledge is being utilised to improve patient safety and lead handover change.

References:
Clinical Learning Environments for Postgraduate Medical Education: A Realist Synthesis

A Wiese, C Kilty, D Bennett
A Wiese, Medical Education Unit, Brookfield Health Sciences Complex, University College Cork, College Road, Cork, Ireland. Email: a.wiese@umail.ucc.ie

Background and purpose
Workplace learning is recognised as being at the heart of postgraduate medical training. Optimising clinical learning environments is essential because they impact on the competence and development of trainee doctors. High quality evidence synthesis supports improvement by facilitating the translation of medical education research into policy and practice. Evidence based design of workplace learning environments is challenging because of the complexity both of workplace learning as an intervention and the clinical learning environments in which it happens. What ‘works’ in one context may not be effective in another. The aim of this study was to synthesise the evidence relating to workplace learning in postgraduate medical education to address the question ‘What works, under what circumstances and for whom?’

Methodology
A realist synthesis/review of the literature was conducted in line with the RAMESES guidelines. A realist review is an interpretive, theory-driven, narrative summary of the literature and aims to develop a theoretical framework describing Context-Mechanism-Outcome (CMO) configurations of how, why and when postgraduate medical training is effective. An initial programme theory for workplace learning in postgraduate training was developed from existing middle range socio-cultural theories of learning.

Database searches were completed for the period 1995-2015 in; Academic Search Complete, Australian Education Index, British Education Index, Cinahl, Eric, Medline, PsycInfo and SocIndex. Search terms were developed iteratively and the review was re-focussed in response to findings and stakeholder input. A hand-search for relevant papers was also conducted in; Academic Medicine, Advances in Health Sciences Education, Graduate Medical Journal, Medical Education, Medical Teacher and Postgraduate Medical Journal. Data was extracted and synthesis is currently underway.

Results
Results from this review will be presented.

Discussion
The findings of this review will provide important information for stakeholders responsible for training junior doctors, to improve and optimise their learning environment.

Introduction
The transition to surgical training can be a stressful time for trainees especially during national handover periods. During this time, patient mortality can increase and Hospital efficiency reduces. Intensive, simulation rich training programmes or “Bootcamps” have been postulated as a solution to address some of these issues. This paper highlights the impact of an innovative inaugural Core Trainee Surgical bootcamp induction.

Method
Twenty-five first year surgical trainees participated in an extensive three-day programme aimed to prepare trainees for the workplace. The programme focused on patient safety and the pillars of clinical governance and its content were mapped to the ISCP syllabus. The programme included a comprehensive introduction to the region and requirements for Core Trainees before proceeding onto simulation rich, interactive, small group sessions, focusing on technical skills, patient handover, telephone and written communication skills. All trainees participated in a Simulated Ward Round and a trauma management session to specifically develop leadership, team working and ward management skills. Intensive skills training in the specialties in which they cross cover on call was also provided. Trainees each completed a pre and post course questionnaire using a 5 point likert scale and free text evaluation of the value of the programme.

Results
Significant improvements were reported in all aspects of non-technical skills and in particular; patient handover (p=0.003), referring patients to a specialty (p=0.001) and ward round skills (p=0.005). Self reported confidence in technical skills improved significantly (P<0.05). Other benefits included improved understanding of trauma patient management (p<0.01), improved confidence in critical appraisal (p=0.022), and a highly valued pastoral support programme. Overall, trainees reported that the bootcamp made them more prepared for the workplace and developed essentials skills required for surgical training. All trainees would recommend bootcamps for future surgical trainees. Free text feedback quoted trainees reporting the bootcamp helped them identify what was required of them and motivated them to be the best they can be.

Conclusion
Surgical Bootcamps are an innovative and effective way of establishing the foundations of high quality and safe surgical practice. Issues not usually covered in a standard induction can be included in safe environments with peer and multidisciplinary senior faculty. A unique advantage is the ability to establish a collegiate and pastoral support network that trainees find valuable. They should be considered as the Gold Standard for Surgical Induction programmes.
Cross Specialty, Simulation Based Basic Endovascular Skills Training (SBT): An effective model for improving trainees’ confidence and interest, and enhancing patient safety

P Leighton, C Nesbitt, S Mafield
P Leighton, Vascular Clinical Fellow, Musgrove Park Hospital, Taunton, TA1 5DA

Background and Purpose
There is currently no organized early stage SBT for trainees in the UK. We have designed two courses to meet the needs of trainees:
Basic Endovascular Skills (BES) is designed for specialty trainees (ST).
Foundations in Endovascular Practice (FEP) is designed specifically for Foundation level trainees (FLT).

The aim of our study is assess the appropriateness, suitability and effectiveness of early stage cross specialty SBT for improving trainees technique and enhancing interest and recruitment into endovascular specialties.

Methodology
Both FEP and BES are cross-specialty (vascular surgery (VS), interventional radiology (IR) interventional cardiology (IC)) hands-on, simulation based, expert led endovascular training days. Small groups rotate around a circuit of stations covering three core areas; “safe arterial access, navigation and closure”. On BES trainees complete a pre-course online lecture series, and on FEP trainees receive a ‘specialty specific lecture’ was delivered to answer targeted questions from trainees and give a focused insight into a career in endovascular intervention. All attending trainees completed baseline and post-course questionnaires scoring confidence in various elements of endovascular practice on a standard visual analogue scale (VAS). Several statements were rated on a 5-point Likert scale. Scores were analysed using Wilcoxon matched pairs signed ranks test.

Results
Over 270 trainees have completed a UKETS course (March 2012 – May 2015). 258 completed pre and post-course questionnaires (106 BES, 152 FEP). Trainees on both courses recorded greater confidence in safe arterial access (p=0.00), safe arterial closure (p=0.00) and all elements of safe navigation (p=0.00). FLT strongly agreed they had “more confidence making a career choice into their chosen specialty” (p=0.00). All agreed that training alongside colleagues from other endovascular specialties was useful. Written testimony was overwhelmingly positive.

Discussion and Conclusions
SBT offer a successful method of promoting recruitment into endovascular specialties, improving trainee’s endovascular technique thus maximising patient safety.
Developing a validated simulation programme for Core and Higher surgical trainees in Non-operative technical surgical skills (NOTSS)

Humphreys AK, Bamford R, Coulston J
AK Humphreys, Health Education South West (HESW), Severn Deanery

Background
Human Factors training and Non-operative technical surgical skills are playing an increasing role in surgical training. Although the principles are part of everyday training programmes; as yet there is no UK validated simulated scheme.

Aims
The aim of this study is to develop a curriculum with a series of simulation exercises to enhance surgical training and use the NOTSS behavior marker system as framework for providing trainee-specific feedback. Specifically focusing on the four NOTSS categories; Situation awareness, decision making, communication and teamwork, and leadership.

Methods
A three stage training pathway will be developed taking into account relevant human factors issues involved, leading towards deanery approved validation prior to CCT. The curriculum is broadly divided into three key stages to transition trainees from CT1 – ST8; allowing trainee progression in a step-wise process encompassing situational learning exercises leading to CCT requirements. Three levels (Pre-operative, Intra-operative and Post-operative) were developed to ensure relevant and realistic objectives for the appropriate training level. Stage 1 is in development for 2016.

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<td>Breaking bad news</td>
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Discussion
The following table shows example of on-line resources, workshops and simulated courses specifically aimed at encompassing the set curriculum and building on from established courses already run within the deanery.
Exploring the development of professional identity in renal physicians

H Beckwith, M Kingsbury, J Horsburgh.
H Beckwith, Renal Registrar, Educational Development Unit, Imperial College London, Level 5, Sherfield Building, Exhibition Road, South Kensington, London. SW7 2AZ

Background
The development of professional identity (PI) is fundamental to becoming a practicing doctor. There is a body of literature exploring development of PI in the social science field, which has been extrapolated into undergraduate medical education theory. In contrast there is little work exploring how this continues in the postgraduate setting or the challenges in creating complex and fused identities.

Using nephrologists as a study population, this qualitative research study aims to explore how physicians develop their PI (including factors that facilitate this) and how multiple PI's are linked and conceptualised.

Methodology
Ethical Approval was granted by Imperial College London. In-depth semi-structured interviews were conducted with eleven nephrologists (minimum three years specialty experience): five registrars (trainees) and six consultants. Interpretative phenomenological analysis was used to conduct and analyse the interviews.

Results
Development of PI is a gradual process, requiring a dialectical approach, influenced by physical and social learning environments. Factors facilitating the development of a strong PI included a period of social exclusivity away from general medicine, working with a cohort of patients suffering from the disease and with experts in the area. The importance of being allowed to give advice independently in facilitating the development of PI was highlighted.

The development of multiple PI’s appeared to begin in early postgraduate training and continues throughout a medical career, with individuals taking on additional roles as their seniority progresses. The PI’s of trainees appear less well formed. Conceptualisation and integration of multiple PI’s was variable amongst participants. A state of self-transcendence was reached by some consultants, where multiple converging identities became irrevocably intertwined. The fluidity of multiple roles and identities was acknowledged, with different identities taking different priorities at different times.

The concept of overlapping or intertwined identities was viewed positively, with improvements in outcomes, efficiency and learning noted. Compartmentalisation as a time management method improves output and accessibility for other team members, however fully compartmentalising roles and PI’s does not seem favoured by the majority of practicing nephrologists.

Discussion and Conclusions
Skills acquisition throughout training was a given, and did not contribute to the development of PI. Whilst clearly a competency-based approach is sensible to ensure generic curriculum skills are attained, a more social approach to curriculum progression could be valuable with emphasis on opportunities to develop PI. Placing an emphasis on reflection, and encouraging time out-of-programme could help facilitate the development of PI in postgraduate trainees.

References

75
Exploring the factors that impact on the success of students from widening participation backgrounds

S Nicholson, K Piper, O Westwood, M Rezaian
M Rezaian, m.rezaian@qmu.ac.uk

Background and Purpose
As medical students from lower socio-economic backgrounds are proportionately under-represented within medicine (GMC, 2013:4), it is imperative that we consider what issues and consequentially what support mechanisms will be needed if these numbers should substantially increase according to political demand. This paper investigates the determinants affecting the academic attainment and progression through university for multi-faculty widening participation (WP) students from a London-based university. In doing so, WP students are examined in relation to the wider student cohort in order to understand the important factors that are associated with differential rates of attainment; with subjective accounts of their overall ‘lived experience’ also being considered.

Methodology
Using both logistic regression modelling on an assorted cross-faculty database of students; as well as semi-structured interviews, differential attainment/progression rates and student accounts were explored and gathered respectively.

Results
Higher attainment in school/college was associated with higher attainment within university and those who entered via the clearing process also performed less well than those who did not. In both cases, the effects were longitudinal- thereby extending beyond the first year of university. Those receiving bursaries had lower levels of academic performance in their first year but overall higher levels of attainment in their second year whilst those who received disability allowance had consistently had lower levels of attainment and rates of retention. Interview data highlighted the importance of class-based perceptions in forming relationships with other students and Queen Mary as well as identifying with the Higher Education (HE) process. Finances and ‘markers’ of class (e.g. speech and perceived interests) compelled individuals to form homogenous peer networks; entering through clearing encouraged feelings of hesitation, de-moralisation and lack of preparedness towards HE. Support from teachers and parents were crucial and reinforcing to one another with the former being associated to a more ‘technical’ academic form of support whilst parents were typically perceived as morale-boosting. Bursaries were also referenced within the context of assisting in the practicalities of HE (e.g. travel) and to a lesser extent as a symbolic marker of faith in the individual by the university.

Discussion and Conclusions
The impact of pre-university years and entering through clearing potentially impact beyond the first year of university. Mitigating the negative associations with clearing, and its associated courses, preferably before the start of the academic term improves morale and motivation levels. Facilitating students to take modules from programmes which they initially wished to enrol on again increases morale. Faculty have an important role in enthusing and supporting those who enter via clearing. Initiatives that encourage students to appreciate the importance and purpose of financial provisions and ensure that they are used most effectively are required. Whilst the benefits of perceived homogenous networks in terms of support and the notion of ‘shared experience’ must not be offset with any efforts to encourage students to diversify their peer networks and thus, their social interaction and wider feelings of inclusion. Arguably the largest gap from expectations and ideals revolves around disabled learners who continue, despite assistance, to fare as well as their counterparts.
Foundation Year 2 doctors’ reasons for leaving UK medicine: an in-depth analysis of decision-making

SE Smith, VR Tallentire, A Laidlaw, L Pope, J Morrison
SE Smith, Honorary Senior Lecturer, Centre for Medical Education, University of Edinburgh Medical School, Chancellor’s Building, 16 Little France Crescent, Edinburgh

Background and Purpose
The Foundation Year 2 (F2) Career Destination Report shows that in 2014, only 58.5% of UK F2 doctors (F2s) progressed to UK specialty training, compared with 71.3% in 2011. As F2s move abroad, take career-breaks or leave the profession, 12% of UK GP specialty training posts are unfilled and 17% of Scottish GP practices report at least one vacancy. Two studies have attempted to gain insights into why doctors leave UK medicine; both gathered quantitative data via questionnaires. This study aims to explore F2s’ reasons for leaving UK medicine, and develop a theory that facilitates improved understanding of the decision-making involved.

Methodology
Data collection and analysis will be approached from a rational choice theory perspective. Feldman and Ng’s 2007 framework describes the factors that affect career mobility, in a non-medical context. Following ethical approval, F2s who are considering leaving UK medicine will be invited to volunteer to participate. Semi-structured interviews, based on Feldman and Ng’s framework, will be conducted by a single researcher. Interviews will be audio recorded, transcribed verbatim and anonymised. Data analysis will be undertaken using template analysis. Feldman and Ng’s codes will be used for the initial template, but the pre-existing framework will be modified and amplified as the analysis proceeds. Follow-up interviews will be undertaken to clarify points of ambiguity and present the evolving theory for feedback.

Results
The results will be a theory that explores the factors influencing F2s’ decisions to leave UK medicine. This will be a modification and amplification of Feldman and Ng’s framework, which includes: The structural perspective (social and legal factors); the occupation perspective (wage levels, labour intensity); the organisational perspective (organisational staffing policies, organisational socialisation practices); the work-group perspective (social support and group cohesiveness, use of external labour); the personal life perspective (support in resolving work-life conflict, family and friendship networks); the personality perspective (attachment styles, big five personality traits).

Discussion and Conclusions
This original, theory-driven work will be of benefit to the medical education community as it will improve understanding of hitherto unexplained trends and provide a springboard for future work in related areas of study. The outcomes will also be of benefit to policy-makers who are currently addressing the crisis in recruitment to UK specialty training schemes. By developing a more comprehensive understanding of the factors that influence F2s’ decisions to leave, policy-makers will be better placed to make UK medicine a more attractive prospect.

References
How can we measure the quality of the learning environment in obstetrics? Development and piloting of a novel interaction map tool

Beska B, Williamson A, Smith M, Redmond L, Hanley J
Hanley J, Director of Medical Education, Education Centre, Sir James Spence Institute, Royal Victoria Infirmary, Newcastle upon Tyne Hospitals NHS Trust, Newcastle upon Tyne, NE1 4LP. United Kingdom.

Background
The learning environment is an important aspect of the effectiveness of postgraduate teaching. The General Medical Council’s recent standards on providing excellence in medical education emphasise the need for a good learning environment. Obstetrics presents trainees with a unique learning environment and no tools currently exist to specifically measure the complex, multi-disciplinary learning and teaching interactions within this specialty. We aimed to develop and pilot a novel tool to assess learning interactions and barriers to learning within obstetrics.

Method
A stepwise approach was taken. Firstly, questionnaire items from current tools were collated and discussed with an expert focus group in an informal Delphi-like method to produce a draft tool. Secondly, this tool was optimised through piloting and expert input. The final tool consisted of Part I, an objective participant observation to be carried out by an objective observer and Part II, a subjective semi-structured interview and self-administered questionnaire to be taken by medical and midwifery staff, respectively. Qualitative data from Part II was analysed using a thematic analysis-type method. The final tool was piloted on a series of delivery suite ward rounds.

Results
Data was collected for 6 ward rounds from 25 participants (midwives, n=9 and medical staff, n=16). Part II was split into the domains of atmosphere, learning and distractions for analysis. Cronbach-α analysis confirmed a high degree of internal reliability (α>0.8) for the domains of learning and distractions for both medical and midwifery staff. Within the atmosphere domain, the medical staff semi-structured interviews had a reduced internal reliability (α=0.09), however the questionnaire items taken by the midwives performed well (α=0.85). Novel visual interaction maps were drawn from the data and permitted in-depth comparison between objective learning interactions and subjective learning interactions. Quantitatively, medical staff and the midwifery found the atmosphere positive (4.0/5 vs. 4.3/5, p=0.30) and not too distracting (1.95/5 vs. 1.7/5, lower scores better, p=0.27). The medical staff found the learning opportunities better than the midwifery staff (3.4/5 vs. 2.4/5, p=0.005). Learning opportunities were sometimes missed due to various barriers; which varied between profession, grade, and ward round.

Conclusion
The visual interaction map is a promising tool for visualising and comparing perceptions of learning in this complex educational environment. Triangulation of this visual data with subjective questionnaire and semi-structured interviews allows an in-depth analysis of learning and teaching within obstetrics and provides opportunity to improve learning and teaching through a better understanding of barriers.

References
Implementation and evaluation of peer assessment for postgraduate taught students

Edwards KL, Tomas C
K Edwards, Course Director Sports and Exercise Medicine, Academic Orthopedics, Trauma and Sports Medicine, University of Nottingham, Floor C, West Block, Queens Medical Centre, Nottingham, NG7 2UH

Background
Peer marking has been shown to improve feedback for students\(^1\).\(^2\), albeit not to effect exam performance\(^3\). It is recognized that written marking criteria and grade descriptors are not always easily understandable for students\(^4\) and peer marking may be one way to enable this. Aim: To evaluate whether peer assessment improves the students' perception of their learning experience.

Methods
Students from medical postgraduate taught courses completing a formative critical report (coursework) were invited to participate. In a crossover design, consenting students were randomly allocated to either tutor feedback (control) or peer assessment first, followed by the other protocol. Tutor feedback consisted of grade, written individual and generic comments and a face-to-face discussion. For the peer assessment tutorial, students were randomly assigned three anonymous scripts to mark, with marking schedule and model answer. The sessions were assessed using questionnaire (Likert scale) and focus group. We will collect data four months post-session (which will be in time for the conference) to assess whether the anticipated behavioural changes have taken place.

Results
26/33 (79%) students participated. As well as a positive reaction, the data also indicated that students’ believed learning had taken place which would change their subsequent behaviour. The content of the sessions was important. Over 90% of students found the model answer, marking schedule and generic feedback (tutor only) useful. All students found the grade and written feedback from the tutor useful, but only half for the peer grade. Before these feedback sessions, less than half of students were confident that they understood marking schedules; 19% were confident judging their own work; a third felt they knew how to write a good report. Post sessions, both groups saw similar improvement in their understanding of marking schedules (43%/42% peer/tutor), but the mean changes were small (0.29/0.31 peer/tutor) (p=0.649). Regarding the ability to judge own work, the post-session improvement was greater following the peer assessment sessions (47%/27%; 0.38/0.19 peer/tutor) (p=0.171). Conversely the tutor session led to more improvement concerning how to write a good report (29%/39%; 0.10/0.38 peer/tutor) (p=0.315). Students felt strongly that the tutor session was more valuable in helping them to prepare for future assessments (p<0.0001).

Discussion
Peer marking was found to be a successful, popular adjunct to tutorial teaching for medical postgraduate taught students. Students perceived the peer assessment session more valuable in enabling them to judge their own work and the tutor session better prepared them for future assessments.

Implications of aligning full registration with graduation from medical school

K Mattick, K Kaufhold, N Kelly, J Cole, G Scheffler, C Rees, A Bullock, G Gormley, L Monrouxe
K Mattick, Centre for Research in Professional Learning, Graduate School of Education, University of Exeter, Heavitree Road, Exeter EX1 2LU, UK.

Background and purpose
In 2013, following an independent review of medical education and training, the Shape of Training report recommended that full registration of doctors be aligned with medical school graduation.\(^1\) Subsequently, as part of a GMC-funded study about the preparedness for practice of UK medical graduates,\(^2\) we explored stakeholders’ views about this recommendation. In this presentation, we focus on the implications of the proposed change for undergraduate and postgraduate medical education.

Methodology
Qualitative individual/group interviews (n=117) were undertaken across four UK sites, involving 185 individuals comprising: Foundation year 1 doctors, fully registered trainee doctors, clinical educators, undergraduate/postgraduate Deans and Foundation Programme Directors, other healthcare professionals, employers, policy and government representatives and patient and public representatives. The interviews were transcribed verbatim and analysed using Framework Analysis.\(^3\)

Results
Research participants expressed both positive and negative views on the proposed change. We identify implications for undergraduate and postgraduate education. The data suggest undergraduate medical educators will need to review curricular content and assessment, particularly around patient care and professionalism, and the duration of undergraduate programmes might also need to be considered. Similarly, postgraduate medical educators will need to ensure close supervision to monitor competency limits and avoid errors, but also to ensure optimal healthcare team integration and learning. The division of roles and responsibilities between undergraduate and postgraduate education will need to be clearly articulated.

Discussion and Conclusions
The proposed change to the timing of full registration with medical school graduation would have significant implications for undergraduate and postgraduate medical education in the UK. This research offers insights into programmes of educational change that would be helpful regardless of the ultimate decision about full registration.

References
In at the Shallow End
The effect of peer-mentoring on transition to general medical registrar training

M Holdway, L P Steele, P Fletcher.
M Holdway, Postgraduate Clinical Teaching Fellow, Department of Postgraduate Medical Education, Gloucestershire Hospitals NHS Trust, Sandford Education Centre, Keynsham Road, Cheltenham, GL53 7PX

Background
We need to ensure that physicians-in-training are adequately prepared for the roles they obtain. The Royal College of Physicians (RCP) concluded that 44% of Core Medical Trainees (CMTs) believe that Core Medical Training has not prepared them to be a General Internal Medical (GIM) registrar. New registrars can start on call, with no more support than a registrar many years ahead of them in training. Thematic analysis of a CMT interview conducted in a yet unpublished study by this team found lack of confidence to be a common theme regarding transition to registrar training. Mentoring has been suggested as a tool for improving this transition, but to date little evidence exists to determine its effectiveness in this setting.

Purpose
To assess the impact of peer mentoring on the confidence of CMTs transitioning to GIM registrar training.

Hypothesis
Mentoring for CMTs affects confidence regarding their transition to GIM registrar training.

Methodology
A data collection tool was developed based on published studies which assess confidence. A Likert scale was used with content from the current Joint Royal Colleges of Physicians Training Board GIM registrar curriculum. All CMTs at Gloucestershire Hospitals NHS Foundation Trust were invited to participate. Participants were asked to self-assess their confidence using this tool prior to our intervention. Participants were randomly assigned to two equally sized groups. A crossover design was used to account for bias due to confidence that may be gained with time. The first group of CMTs received the intervention in the first phase, both groups then reassessed confidence. The second group received intervention following this. Both groups reassessed confidence for the third time after the second intervention stage.

For the intervention medical registrars were invited to act as mentors by email and briefed with objectives and ground rules pre-determined by an expert panel of those involved with organisation of medical training. Study leave was granted for the CMT to participate in three on-call shifts. They were asked to organise this with three separate GIM registrar mentors within a two month period. The CMT worked as the medical registrar during that shift with constant direct supervision, guidance and feedback from their mentor.

Result
The full results will be discussed within the framework of the limited published literature with recommendations for future practice.

References
Mapping Clinical Learning Environments for Postgraduate Medical Education and Training: A Multi-stakeholder Perspective.

C Kilty, A Wiese, S Stoyanov, D Bennett
C Kilty PhD, Medical Education Unit, Brookfield Health Sciences Complex, College Road, Cork, Ireland. Email: caroline.kilty@ucc.ie

Background and Purpose
Clinical learning environments are important because they impact the competence, satisfaction and humanistic development of trainee doctors. Designing clinical learning environments is challenging due to their dynamic and complex nature, where multiple activities, including learning, happen simultaneously, impacting each other in non-linear ways. Changes in how healthcare is delivered and duty hour regulations are amongst factors which may present challenges and opportunities for learning in clinical environments. A Group Concept Mapping process was used to address the question; “What are the important facilitators and barriers to learning for postgraduate trainees in clinical environments and what are the priority areas for improvement?”.

Methodology
Group Concept Mapping (GCM) was used to capture the perspectives of trainers, trainees, allied health professionals and hospital management. GCM is an integrated mixed method, using both qualitative and quantitative measures to identify an expert group’s understanding about a topic. A purposive sampling approach was taken to include senior doctors and trainees, allied healthcare professionals, health service managers and patients. Experts (n=200) were invited to participate via a web-based link to a data collection tool. The procedure consisted of five phases: Brainstorming and pruning of ideas; Sorting of ideas into groups; Rating of areas of weakness on two values (‘importance to address’ and ‘difficulty to address’); Analysis of the data included multidimensional scaling and hierarchical cluster analysis; Interpretation of the results.

Results
Fifty-five participants were recruited for the first phase of the process. A smaller group (n=27) participated in the second and third phases in keeping with the GCM process. All stakeholder groups were represented. Analysis revealed barriers and facilitators within ten domains of clinical learning environments. These will be presented along with stakeholder consensus on the relative importance of the barriers identified and the difficulty in addressing them.

Discussion and Conclusions
This Group Concept Mapping process captured a multi-stakeholder consensus which can guide policymakers and educators in terms of where to target effort and resources while maximising impact.

Qualification Inflation: Analysis of Changes in Frequencies of Additional Qualifications among UK and Irish Consultant Plastic Surgeons.

F Ti, C P O'Boyle
CP O'Boyle, Dept of Plastic Surgery, Nottingham University Hospitals NHS Trust, Hucknall Road, Nottingham NG5 1PB. Tel 0115 9691169 ext 55512. Email: Ciaran.o'boyle@nuh.nhs.uk

Introduction
Surgeons have long held their qualifications and post-nominal letters in high regard. Candidates for plastic surgical posts face considerable challenges. Constant competitive pressures may push prospective candidates to seek qualifications, additional to those required for eligibility, in order to improve their competitiveness.

The primary aims of this study were to determine whether the frequency of possession of additional qualifications in plastic surgeons is changing, and whether changes have occurred in the types of additional qualifications held over time. The authors aimed to establish whether Qualification Inflation is a real phenomenon and examine its possible implications for the future.

Methods
A society (BAPRAS) membership list, GMC details, local hospital web sites and personal web sites were used to identify GMC specialist-registered plastic surgeons’ qualifications. The frequencies of possession of qualifications, additional to the requirements for obtaining consultant posts, were calculated. Changes in frequency statistics were analysed using the Chi-squared for trend test.

Results
324 BAPRAS members were identified from the BAPRAS website. All were appointed between 1971 and 2015. Analysis demonstrated persistent, statistically-significant increases in frequencies of possession of: any additional qualifications over time ($P<0.0001$); bachelors degrees ($P=0.001$); masters degrees ($P=0.02$); doctorates ($P<0.0001$); other qualifications ($P=0.0076$) and also in the number of additional qualifications obtained by individuals on the specialist register. Conversely, possession of multiple FRCS-equivalent fellowships, peaked in the early 1990s and has continued to decline in frequency since then.

Discussion
Among UK and Irish plastic surgeons, qualification inflation would seem to be a real phenomenon. More and more plastic surgeons are obtaining more and more different types of additional qualifications. This raises important questions about what is “mandatory” for eligibility for ST3 selection, for consultant posts and what features of qualifications make them desirable in a candidate. Additionally, as extra qualifications become ubiquitous, the value of individual qualifications may be undermined, especially when academic institutions respond to market demand by offering increasing numbers of tempting qualifications to surgical trainees at a time in their careers when they may be highly vulnerable to offers of quick “career fixes”.

83
Introduction
Effective Surgical ward rounds can lead to the prevention of complications, the early recognition of potentially unwell and the critically ill patients and can improve hospital efficiency. Specialist Trainees are often required to lead ward rounds and therefore need to utilise management, leadership and clinical skills, often without any prior training. We aim to identify the value of Simulated Ward Round Training for first year General Surgery Specialist Trainees from Health Education South West.

Methods
All first year Specialty trainees took part in a Simulated Ward Round where groups of four trainees reviewed a simulated patient. Each trainee portrayed a different role of the team including; Surgical Registrar, Foundation doctor, ward nurse and patient. Members of the team were briefed on their role and debriefing occurred using Pendletons rules. Trainees were asked to focus on the use of leadership skills, adopting a systemic approach to reviewing patients, to understand each team members role and to be able to communicate decisions and plans clearly to patients and team members. Pre and post session questionnaires assessed changes to a trainees confidence and understanding of each of these areas and 5 point likert scales were used to assess how a trainee valued the session.

Results
24 trainees took part in the sessions. 85% of trainees reported that the session was relevant to their role and level of training and 90% believed the session was realistic whilst 95% believed that having a real patient was beneficial. 100% and 95% trainees agreed that the session helped them understand the role of others and themselves respectively. Significant improvements were identified in self-perceived ability to lead a surgical ward round (P<0.001), make good decisions on ward rounds (p<0.001), team work and resource management ((p=0.021) and communication skills (p=0.042). All trainees reported that a structured approach to ward rounds was a valuable method to improve ward rounds and that utilising all members of the team increased efficiency. Trainees reflected the use of simulation, especially the patient role-play, enhanced their understanding of ward round management.

Discussion
Simulated ward round training can be an effective and realistic tool to allow a trainee to understand the view of other members of the ward round team and the patient. This allows the development of key skills required for leading and participating in an effective surgical ward round.
The experiences of doctors across the trainee-trained doctor transition: a longitudinal audio-diary study

L Gordon, D Jindal-Snape, J Morrison, G Needham, S Siebert, C Rees
L Gordon, Centre for Medical Education, University of Dundee, Mackenzie Building, Kirsty Semple Way, Dundee, DD2 4BF

Background and Purpose
Throughout their careers, doctors experience numerous transitions. Previous research suggests that, although transitions are seen as everyday minor hassles by some, they can be traumatic for others. With significant impact on their well-being, and when these accumulate without any resolution, they may lead to burn out.1,2 Times of transition can also be seen as periods of intense learning and development.3 To ensure that individual medical staff not only navigate transitions without any adverse effects on their well-being, but also use them as a springboard for learning and development, it is important that staff are resilient. Also that organisations are ready to adapt according to doctors’ needs with strong support networks in place.4 While extensive research exists on early transitions (e.g. final year medical student to doctor), little research has explored the trainee to trained doctor transition.5 This two-year study aims to explore how higher-stage trainees (i.e. within one year of completion of their training) develop their identities as they undertake the transition to trained doctor and into formal leadership roles.

Methodology
This longitudinal audio-diary (LAD) study is following a diverse sample of 24 higher-stage trainees in the UK over an 8 to 12-month period as they complete their training and move into their trained doctor roles (e.g. Secondary Care Specialist, Family Practitioner). Each participant has been interviewed at the beginning and will be interviewed at the end of the LAD period.6 Team-based data analysis is ongoing using thematic framework analysis in the first instance. This will be complete for presentation at ASME 2016.

Results
Initial findings reveal that participants’ transitions are complex and multidimensional in nature with multiple transitions (e.g. a new job and a new house) interacting and impacting on each other in different ways at different times across the data. Participants also describe facilitators and barriers to the transitional process at individual (e.g. working more independently), interpersonal (e.g. a poor mentoring relationship), systemic (e.g. formal teaching activities) and macro (e.g. processing of paperwork through Royal Colleges) level.

Discussion and Conclusions
This research gives unique insights into this important transition within a medical career. It also reveals how the multiple dimensions of transition can be experienced over time.1,2 Our results will influence the ways in which doctors plan for, and are supported as they move through this transition.

References
Trainee doctors’ identities: the influence of workplace environment and socio-political context.

D Bennett, M Horgan, C.Bergin, T Dornan  
D Bennett, Room 2.53 Medical Education Unit, Brookfield Health Sciences Building, University College Cork, Cork, Ireland. Email:d.bennett@ucc.ie

**Background and purpose**  
This study was undertaken during a period of flux and uncertainty in Ireland in the Irish healthcare system. Ireland was in deep recession. Morale amongst doctors had plummsted as healthcare spending was slashed and recruitment halted. Poor working conditions for trainee doctors and a linked exodus of graduates of Irish medical schools were topics of national discussion and debate. Similar issues are currently to the fore in the UK. The objective of this study was to explore the ways in which doctor identity and career decisions were shaped by day to day experiences in the workplace, set against the backdrop of the national discourse about doctors’ training.

**Methodology**  
This study was oriented towards social constructionism and was part of a larger study into identity and career choice. Secondary analysis of interviews and audio-diaries, which had been collected from eight trainee doctors over a period of 18 months, was undertaken, focussing on the issues outlined above. Participants were at a range of stages of training and working in different specialty and geographical areas. Figured Worlds(1) theory was used to interpret trainee narratives. Skinner’s methodological exemplar of Bakhtinian discourse analysis(2) and Gee’s meso-linguistic discourse analysis(3) were sensitising influences.

**Results**  
Participants imagined (figured) themselves in a cultural world of career success, characterised by typically successful career paths and associated with certain valued actions and outcomes. They evaluated their professional progress within this cultural world and were motivated by it. In their daily work, however, they often had negative experiences and understood that they were not valued. This tension found a voice in the national discourse. Career decisions emerged as trainees sought to ‘orchestrate’ these conflicting aspects of their identities.

**Conclusion**  
Doctor identity and career decisions were shaped by day to day experiences in the workplace, set against the backdrop of the national discourse about doctors’ training. This study underlines the importance of valuing and supporting trainee doctors in the workplace and demonstrates how failure to do so impacts professional identity development.

What can we learn from remote supervision about the ‘apprenticeship model’ of medical education?

SM Wearne, T Dornan, PW Teunissen, T Skinner
S Wearne, General Practitioner, Alice Springs, Northern Territory, and Senior Medical Adviser, Australian Government Department of Health, Scarborough House, Woden, Canberra, ACT 2606, Australia

Background and purpose
The ‘apprenticeship’ model of medical education (1) is used in postgraduate training programme across the globe (2). However, many aspects of apprenticeship are implicitly assumed and difficult to see and research as they are so embedded within practice.

Remote supervision in outback Australia (3) and northern Canada (4) uses information technology to connect physically separate GP supervisors and their ‘apprentice’ GP registrars. This approach provides insights into apprenticeship learning in practice, which this paper will articulate.

Methodology
This paper is a constructivist synthesis of interviews with 11 remotely supervised GP registrars (5) and 18 remote GP supervisors (6) in Australia and Canada. The interviews were conducted from a social-cultural learning perspective on work-based learning.

Results
Remotely supervised registrars in solo practice learnt through responsibility for patients’ care over time and had flexibility to answer any questions from any resource. The quality of the relationship between supervisors and registrars determined the effectiveness of supervision.

Remote supervisors, who took holistic views of registrars and their families, because they understood the potential stressors of isolated rural practice, could target their support and educational input. Their supervision was both reactive and proactive. This needed explicit arrangements on how contact would be initiated, in what circumstances, how information would be shared and what supervisors would do if there were concerns about registrars’ well-being or practice. Supervisory continuity created efficiency by building on prior learning, and depth through discussing the personal and professional dilemmas of being a health professional.

Discussion and Conclusions
Continuity of care and responsibility for patients, and continuity of supervisor can promote registrars’ learning. These key factors for apprenticeship learning are threatened by health systems that focus on episodic clinical care and shift systems for clinical staff. Alternative ways to promote continuity are needed as are clear guidelines on each person’s role in postgraduate apprenticeships.

References
Cost, Value and Quality in Professional Learning: promoting economic literacy in medical and teacher education.

VM Baumfield, K Mattick
K Mattick, Professor of Medical Education, Centre for Research in Professional Learning, University of Exeter, St Luke’s Campus, Heavitree Road, Exeter EX1 2LU

The need to develop robust responses to questions of the cost, value and quality of professional learning and mount convincing economic arguments is pressing in the current financial climate. Current trends in the evaluation and funding of all aspects of public service is evident in the statement of aims of the government’s ‘What Works Network’: (to) summarise and share research with local decision-makers, helping them to invest in services that deliver the best outcomes for citizens and value-for-money for taxpayers (https://www.gov.uk/guidance/what-works-network).

The popularity of the Education Endowment Foundation’s ‘Teaching and Learning Toolkit’ can partly be attributed to the inclusion of a measure of cost per intervention and cost effectiveness of training is a growing theme in the medical education literature. Teacher educators and medical educators have much to learn from each other in the pursuit of excellence in professional learning. Members of the education sub-panel for REF2014 emphasised the potential for beneficial holistic research through interdisciplinary collaboration across the two professional communities (1). The need to work across teacher and medical education silos in the interest of practitioners subject to the same neo-liberal agenda of standardization, measurement, and regulation of professional activity has been highlighted by Professor Tim Dornan in a BERA blog.

We report on the outcomes of a BERA Research Commission in which ‘expert witnesses’, representing a range of perspectives, interrogated the types of evidence used in the evaluation of the relationship between the cost of provision for professional learning and impact on the value and quality of education. The commission addressed two intersecting contexts: the interface of education with economics, and between teacher education and medical education. Cases drawn from teacher education and medical education in the four jurisdictions of the UK initiated a community of inquiry into the use of evidence to inform policy and practice in teacher education and medical education. We are now working towards establishing an observatory to support the sharing of information, strategies and experiences in responding to issues of cost, value and quality in professional learning; the presentation is integral to the extension of this dialogue to the wider medical education research community.

Critical Incidents - we know a lot but learn little

PW Johnston
PW Johnston, Hon Clinical Professor and Depute Postgraduate Dean, Scotland Deanery (North), Consultant Pathologist, Aberdeen Royal Infirmary, Foresterhill Aberdeen AB25 2ZD

Background and Purpose
The value of learning from critical incidents (CI) in healthcare is well established in practice and literature. Systems and processes exist to collect and collate data, provide themes to identify areas of potential risk for CI and link these to clinical and educational governance systems at local and national level. There is political and professional imperative to improve patient safety set against of failures to achieve acceptable standards in the UK National Health Service. From this base, much data has been accrued about CI however the evidence of translation of this knowledge to useful personal learning among individual practitioners is scant.

This paper sets out to raise awareness of the rich learning available in CI data and to encourage the linkage of information with the healthcare staff to whose practice they relate directly. It suggests there is a clear intent to learn from CI but the means of doing so are less well developed than the acquisition of data.

Methods
A literature review was undertaken to establish published experience of learning from CI. Eleven useful papers were found. Drawing on these and additional material, observations and suggestions are made.

Results
Barriers to learning are categorised as human and systems-based and impede developing educational solutions to safety issues. There is clear need to focus educational interventions in a way that is acceptable and beneficial to healthcare professionals. It is argued that institutional and governmental views of CI differ from those of the “people on the ground” and thus the approach needs to be tailored accordingly, in line with curriculum development theory. Central is the recognition that feedback to the practitioners involved in a CI is central, aware of the risks to these people if the process is handled ineptly. Whilst educational interventions exist, they focus on analysis and as yet do not show patient benefit.

Proposal
It is proposed there is a need to develop CI learning for individuals in the context of the workplace to enable understanding of CI occurrence and mitigating or preventing factors. Such opportunities may involve feedback individually, via meetings and simulation. They may train for dealing with stress, guilt and shame. Underpinning this is the need to encourage cultures where values prioritise and provide time and space for learning from CI in a system that cares for carers, nurtures and develops and where demonstration of improvement is appreciated.

References
How nurses support medical student transition to junior doctor and ensure their safe clinical practice

R Samuriwo, A Bullock, L Monrouxe, K Webb
R Samuriwo, Lecturer, School of Healthcare Sciences, Cardiff University, Ty Dewi Sant, Heath Park Campus, Cardiff CF14 4XN Email: SamuriwoR@cardiff.ac.uk

Background and Purpose
Nurses make a direct contribution to the quality and safety of patient care in clinical practice\(^{(1-3)}\). However, little is known about the role they play in supporting the transition of medical student to junior doctor and the impact of this dyadic relationship on the quality and safety of patient care. This study examined how the relationship between doctors and nurses facilitates (or inhibits) medical students’ transition to doctor and its impact on the quality of patient care.

Methodology
A scoping review\(^{(4)}\) of the literature was undertaken to identify key theoretical and conceptual insights about the relationship between nurses and newly qualified junior doctors. Qualitative data were gathered via semi-structured, narrative individual interviews\(^{(5)}\) with a purposive sample of nurses (n=20) from six hospitals. We identified personal incident narratives (PIN)\(^{(6)}\) and conducted thematic analysis\(^{(7)}\).

Results
Nurses were reported to play a key role in the maturation of junior doctors: facilitating the development of functional, cognitive, ethical and personal (behavioural) competence and capability in most aspects of clinical practice. We present the different ways in which nurses support the transition from medical student to doctor as a model and relate these facilitative actions to nurses of different professional standing.

Discussion and Conclusions
Nurses ensure patient safety in clinical practice and support newly qualified doctors’ growth in various aspects of professional practice. Further research is needed to build on this explorative study.

References
Improving departmental induction through peer-led teaching

S Holmes, A. Cooper, G. Dark
S Holmes, Northern Centre for Cancer Care, Newcastle-upon-Tyne, United Kingdom.

Background
At times of doctor changeover, patient safety is jeopardised\(^1\). Effective induction has the potential to prepare new doctors at times of transition, mitigating this risk. However, induction is frequently perceived as a ‘tick-box’ exercise incongruous with trainees’ needs\(^2\)\(^,\)\(^3\). Can induction be reclaimed as a valuable source of training through trainees’ input? We explored the effect of peer involvement in designing and delivering departmental induction in a tertiary oncology centre.

Method
The predefined induction package for pre-ST3 doctors in our department consisted of a day of lectures delivered by senior doctors. For the new cohort of 12 doctors in December 2015, a session was devised with significant involvement of trainees in post. Current trainees guided the content and presented the session as an interactive discussion, which pivoted on a worksheet of cases. These case scenarios elicited common clinical and logistical problems encountered during the post. There was ample opportunity for the incoming doctors to ask questions from the previous post-holders.

Results
Moving to a peer-led approach improved the mean ‘overall satisfaction score’ of doctors attending induction from 80\(^\%\) to 96\(^\%\) \((p<0.05)\). In order to test the authenticity of this improvement, we will assess whether this learning is translated into confidence in the workplace. Surveys after two months in post will compare perceived competence in doctors who received the standard or the peer-led induction. Did they feel equipped for their role following induction? Were they prepared for common challenges, such as accessing senior medical support out of hours and managing emergency triage calls? The result of these surveys will be available at the time of the conference.

Conclusion
We propose that the clinical relevance and accessibility of induction programmes can be promoted through direct involvement of trainees in post.

References
Using group discussion with Year 1 MBBS students to improve the quality and quantity of their feedback for their clinical placement tutors

MJ Hayfron-Benjamin, C Mackay, S Haji, O Ashaju, E Duncan, M Kyriakides
MJ Hayfron-Benjamin, Barts and the London School of Medicine and Dentistry, Garrod Building, E1 2AT

Background and Purpose
High quality feedback on teaching is important within medical education (1). Tutors gain valuable information on their teaching methods, faculty use feedback to shape curriculum, and it is a GMC requirement that medical students are able to constructively evaluate the quality of their learning experiences (2).

Year 1 MBBS students at Barts and the London undertake a longitudinal primary care placement in small groups. They provide feedback to tutors at the end in the form of an individually and anonymously completed online survey. Response rates have historically been poor (25%), polarised and often of little use to tutors trying to improve their teaching.

Methodology
Modifying an approach developed at Hull York Medical School (3), students were asked to discuss in detail their experiences on the clinical placement and, using a pro-forma, to provide written feedback as a group specifically on the teaching and learning on their placement experience. The qualitative data generated by each placement group was analysed and the themes identified were explored further in focus groups.

Tutor perspectives on the new style feedback were canvassed using a questionnaire, there was also some anecdotal feedback.

Results
In 2014/15 we piloted the use of group feedback at 8 sites. Following a positive response to this we have rolled the project out to all 45 placement sites for 2015/16.

Themes that emerged from the student data included the effect the chair can have on the group discussion, the positive and negative aspects of discussing their opinions and coming to a consensus view; and the loss of anonymity.

Tutors described the feedback they received as ‘enlightening and thought provoking’; and ‘beneficial to their development as an educator’. The process was seen as somewhat labour intensive.

Discussion and conclusions
Our pilot study in 2014/15 showed that students had the skills needed discuss and complete a feedback proforma without a faculty facilitator. The subsequent focus group discussion indicated that students both enjoyed the process, felt that their ability to critically appraise had improved, and were comfortable to give feedback as a group.

The results from this larger study will confirm whether this method is acceptable to students, helping them to develop their feedback and evaluation skills, and whether the data generated is useful to tutors, enabling their teaching practice to evolve and improve.

Three students who took part in the pilot (OA, ED and MK) continue to work on this project.

References
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Professionalism
Are some doctors more complaint or discipline prone than others?
A review of complaints received by the Medical Council (Ireland) 2008-2012.

P Kavanagh, S O'Hare
P Kavanagh, Director of Professional Development and Practice, Medical Council Ireland, Kingram House, Kingram Place, Dublin 2, D02 XY88

Background and Purpose:
In 2015 the Irish Medical Council (the regulator of doctors in Ireland) systematically reviewed complaints it received about doctors’ practices (from 2008 to 2012) to help inform its role of investigating concerns about doctors’ fitness to practise and developing guidance on good professional practice for doctors.

Methodology
Basic information from each complaint was extracted from the Council’s complaints handling database (e.g. whether the complaint was referred for a full investigation or not, if there was a finding made against the doctor, which sanction was recommended). This information was merged with registration data held about doctors to explore if doctor characteristics could be said to be associated with higher chances of being complained about, being referred for a full investigation, or, receiving a higher impact sanction.

Results
Male doctors, older doctors (aged 56-65), doctors who qualified in Ireland, and Specialist doctors were significantly more likely than other doctors to be complained about. The odds of having a complaint being referred for a full investigation were significantly higher for male doctors, doctors aged between 20-45 and over 65, doctors who qualified outside Ireland, and doctors who held general or trainee registration. When a finding was made against a doctor, doctors in the 46-55 and 56-64 age ranges, doctors who qualified outside Ireland and those without specialist qualifications were significantly more likely than others to receive a high impact sanction on their registration.

Complaints made by members of the public were more likely to involve specialists and doctors who qualified in Ireland than complaints made by employers and healthcare professionals.

Discussion and Conclusions
Although doctor characteristics being associated with different outcomes of fitness to practise investigations by medical regulators is a not new phenomena, with data from the UK\(^1\) and Australia\(^2\) showing similar patterns, having these findings replicated in Ireland shaped many Medical Council functions including investigating fitness to practice concerns, providing guidance for doctors’ conduct and ethics, and quality assuring doctors education, training and lifelong learning.

References
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Cluster projects: community engagement projects developing leadership and teamworking skills in final year medical students.

P Coventry, H Clifford, H Derbyshire, RK McKinley, A Panesar, S Simpson, S Thirlwall
A Panesar, Clinical Teaching Fellow, School of Medicine, Keele University, U.K.

Background and purpose
In response to the changing roles of healthcare professionals, the GMC\(^1\) expects doctors to “… provide leadership …, and vision ….” Educators have noted difficulty in “… combine[ing] needed leadership competencies with actual service opportunities.”\(^2\) Final year medical students at Keele University are placed with community organisations, with the objectives of learning and developing such skills by working in small groups to devise and implement a project to improve services, facilities and /or the wellbeing of its users.

Educational innovation
Community organisations are recruited near GP practices in which final year students are placed in Staffordshire, Shropshire and the West Midlands. Students in neighbouring practices form clusters of 2-6 students. With the guidance from the host organisation, students develop a project which is reviewed by the medical school and complete it over a 10 week period.

Students submit a 2000 word project report which includes a reflection on leadership and team working and make a 10 minute oral project presentation to an audience of peers, faculty and project providers. Engagement is mandatory but all assessment is formative.

Evaluation
We have estimated the total amount of curriculum time invested in the projects and are collating impact descriptors from providers and students.

Results
In the first 5 years of the programme we estimate that students have contributed 20 person years of labour to local organisations. Examples of projects and outcomes achieved will be shared.

Discussion and conclusions
Keele’s cluster projects are an important deliverable of our social accountability agenda and ensure that our students experience the challenges of teamworking and leadership. We consider this delivers, resulting in positive outcomes for students, school and our communities.

References
1. GMC Leadership and management for all doctors (2012)
Background and Purpose
Developing a sense of professionalism is a key component of medical students’ education. Undergraduate medical education provides a range of opportunities for students to observe, learn and develop values and behaviours integral to becoming a professional. Such opportunities include placement experiences and reflection. These help to increase students’ self-awareness, which is proposed as a key component of professionalism\(^1\). “Reflective learning involves the critical analysis of experience to understand its broader context and integrate new learning that has resulted. For the individual, reflection is related to self-awareness, self-regulation, self-monitoring and continued learning”\(^2\). The development of a sense of professionalism can be especially important for widening access students who are less likely to have role models or a professional in their family and also less likely to have a culture of life-long learning. Widening access students at the University of Southampton undertake professional practice modules in the first year (Year 0) of the programme. These sessions focus on core features of professionalism with greater emphasis and time than is often possible in later years. This study aims to explore students’ perceptions of the effectiveness of the professional practice modules in helping them to develop a sense of professionalism.

Methods
Year 0 students’ perceptions of professionalism will be assessed through collection of qualitative data from focus groups throughout the year and free comments from module evaluations. These data will be analysed using inductive thematic analysis to identify key patterns or trends. Quantitative data will be collected from module evaluations and will be presented using descriptive statistics.

Results
Factors students perceived to be helpful and less helpful in developing their sense of professionalism will be identified and presented. Initial data indicates healthcare placements and small group discussions of their placement experiences are particularly valued by the students whereas they find self-assessment and peer assessment more challenging and these activities are less well received. These themes will be explored further through the year to determine if there are any changes in the students’ perceptions as they progress.

Discussion
Embedding opportunities to reflect and discuss placements and other learning opportunities enables students to contextualise these experiences within their own professional development\(^3\). Widening access students found the variety of teaching and learning methods helps them to directly relate their professional development to placement experiences. Small group discussions of reflections of placement experiences were perceived as being especially beneficial in establishing a sense of professionalism.

\(^1\) Coulehan J. Viewpoint: Today’s Professionalism: Engaging the Mind but Not the Heart. Acad Med 2005: 80; 892-898
\(^3\) Monrouxe LV, Rees CE and Hu W. Differences in medical students’ explicit discourses of professionalism: acting, representing, becoming. Med Educ 2011: 45; 585-602
Experiences of integration of widening access students and graduates into medical school and the medical profession, respectively.

White J, Curtis S.
White J (Medical Student) Medical Education Development Unit, Faculty of Medicine, Building 85, University of Southampton, SO17 1BJ

Background and Purpose
The six year widening access (WA) programme (BM6) at the University of Southampton was introduced in 2002, alongside the existing five year (BM5) programme. Since its foundation, BM6 has shown many areas of best practice in enabling access to Higher Education and the medical profession to students from low socioeconomic backgrounds. Contextual admissions are becoming widespread among UK medical schools to facilitate access for underrepresented groups. Literature, relating to outreach, selection and recruitment, demonstrates increasingly widened access to the profession. An area in which there is less evidence is the factors that might affect WA students' integration into medical school and subsequent integration to the medical profession. Garlick and Brown highlight the need for extra academic and pastoral support, to enable WA students to reach their potential. Exploring the experiences of WA students, in medical school and in the medical profession, may provide medical schools with the evidence to help raise awareness and provide appropriate resources to tailor specific support to WA students' progression through medical school and into the medical profession.

Methods
Semi-structured telephone interviews of pre-prepared open-ended questions were carried out to explore BM6 final year medical students' and BM6 graduates' experiences of medical school and the medical profession, respectively. The interviews were recorded, transcribed and analysed iteratively, using inductive thematic analysis.

Results
Analysis of ten undergraduates’ and nine graduates’ interviews highlighted themes including: reflection (including self-reflection, reflection on others, reflection on the wider social implications of WA); resiliency and the creative ability to find positives from previous life adversity; BM6 medics’ sense of integration and how this seems to improve across the transition from the final year of medical school into the profession post-graduation.

Discussion and Conclusions
Integration into medical school and the profession was generally good for the majority of participants; however one participant felt least integrated at later stages of study and on completion of their professional training. This prompts the need for a review of continued pastoral and professional support throughout and following medical school for WA students and graduates. Differences in prior life experiences and values seemed to influence participants' perceptions of how they formulate judgements, and self-perception. These individuals felt they add niche elements of empathy to the profession, noting a common narrative with working-class patients. These findings support the benefits of a more representative societal spectrum of doctors.

References
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Learning To Care Whilst Learning To Cure - Creating A System To Optimise The Employment Of Medical Students As NHS Clinical Support Workers

S Meldrum, Clinical Teaching Fellow, Medical Education Directorate, Third Floor, Outpatient Building, Western General Hospital, Edinburgh, EH4 2XU

Background, Purpose and Methodology
The NHS in the UK employs thousands of healthcare assistants, now often referred to as clinical support workers (CSWs). CSWs help with the day-to-day care of inpatients, including helping patients to wash or dress, serving food, making and changing beds, and talking to patients to help them feel less anxious. They serve an important role in the hospital care of patients, but a role that is very different from the clinical diagnosis and management taught to medical students during their undergraduate training.

Following discussion with local medical students, there was clearly much enthusiasm about the possibility of being employed as a CSW within the NHS during their time as an undergraduate student. This would obviously have to be done during weekday evenings and weekends so as not to interfere with scheduled medical school activities, but students were excited by the potential opportunity to see the clinical environment and the care of patients from a different viewpoint from that provided by ward rounds. There was also the added attraction of earning some money through a flexible job.

The local NHS Human Resources Department was enthusiastic about the prospect of medical students being employed as CSWs, viewing these potential employees as diligent, reliable, and already committed to a career in healthcare. It was decided that a streamlined system should be created that would encourage and give all local medical students an opportunity to apply for a post as a CSW with the local NHS health board. This system is scheduled to start in March 2016, with the plan that a number of students will be employed by the NHS by June 2016. Students are also being interviewed about what they are hoping to gain from clinical support work before starting, and what they have gained from the work after doing it for a period of time.

Results and Discussion
I will discuss the system that has been created, which includes recruitment drive sessions, information sessions, advice and assistance to students on the application process, and a modified version of the local mandatory induction into NHS work. It is anticipated that many of these principles could be applied to any medical school wishing to work with its regional health service in employing students. The outcome of semi-structured interviewing of students regarding the benefits of this type of work will also be discussed.
Networking as a Career Tool for Students - Is there a Gender Difference?

M Hochleitner, H Siller, G Tauber, A Bader
M Hochleitner, Medical University of Innsbruck, Head of Women’s Health Centre, Innrain 66, A-6020 Innsbruck

Background and Purpose
Networking is known to be an uncontested tool when climbing the career ladder in academe and beyond. Men have taken this to heart in old-boy networks, etc. But what about women? To date, almost all well-known and successful networks are old-boy networks.

Methodology
In the framework of a study of differences between the students at the Medical University of Innsbruck, namely Austrians, Germans and Turks, we surveyed female and male Turkish students in focus groups of 12 persons each, whereby the survey also included one question about networking.

Results
The question “Do you know each other?” was answered in the affirmative by all the men. They stated that they occasionally meet and do things together, such as going to mosque, going out for a drink, etc. Furthermore, they also reported having a buddy system, i.e. they felt an obligation to give first semester students all the information they needed. The women, by contrast, reported that they did not know each other, despite their consisting of student workers at my department and one or two female friends brought by each of them. They engaged in no joint activities whatsoever with persons outside this close circle of friends. At the end of the two-hour interview the men stressed that it was very interesting and that they would like to do such an interview once a semester. The women voiced no such interest.

Discussion and Conclusions
The experience made with these two focus groups corresponded approximately with the cliché of existing male networks and the great need for women to catch up in this respect. However, at the European universities this is largely traced back to the centuries-old tradition of male insider groups, a fact that in our group (almost exclusively second-generation Turkish immigrants holding an Austrian passport) does not provide a satisfactory explanation. Add to this the fact that in recent decades networking has been massively propagated as part of affirmative action programs for women at universities as well as under equality and equal treatment rules. Apparently, these efforts have met with no visible success, a fact that is also true for most of our non-Turkish female students.
Preparation for Treating Life Limiting Illness – Beyond Palliative Medicine

SP Qureshi,
SP Qureshi, Clinical Fellow in Medical Education, University of Edinburgh, Chancellors Building, 49 Little France Crescent, Edinburgh, EH16 4SB. Shaun.Qureshi@ed.ac.uk

Background and Purpose
Doctors in all specialties must provide supportive care at the end of life, but this is an area which junior doctors are poorly prepared for, and find stressful. Efforts have been made to improve teaching in palliative medicine. This may improve learning about patients who have already been accepted to be dying but does not address the full complexity of care for patients with life limiting disease. For example, curative treatment does not always exist independently of palliative treatment, and can overlap depending on the clinical scenario and the wishes of the patient. It is not always clear whether continuing active treatment is in the patient’s best interests. Navigating this area of challenge and uncertainty can be difficult even for experienced clinicians, and different medical consultants may advise different treatment plans for the same patient. This research aims to identify and define dissonance between clinical practice related to life-limiting disease and undergraduate preparation, and to determine the skills, attributes and emotional strengths needed. Analysis of the findings will guide educational interventions which will be developed and integrated within the University of Edinburgh undergraduate medical curriculum.

Methodology

Semi-Structured Interviews: One-on-one interviews will be carried out with doctors in training during which the trainees will explore experiences and perceptions of patient care when medicine was limited in its capacity to cure.

Survey: In order to triangulate findings related to doctors in training, the themes developed from interviews will be used to develop a quantitative survey that will be distributed to doctors in training more widely.

Literature Review: A literature search will be designed and medical and education databases (Embase, MedLine, EREC) will be searched in order to identify existing studies on interventions for improving preparation for practice for treating patients with life-limiting disease. The effectiveness of the interventions will be reviewed.

Educational Interventions and Curriculum Development: The themes identified and the findings from the literature review will inform development of education interventions for the University of Edinburgh medical students. This will be done in discussion with subject experts, and leading figures in education within the medical school.

References
The students’ story: a narrative exploration of undergraduate medical student identities

M Corrigan, JL Johnston, C Thomson, K McGlade.
K McGlade, Centre for Medical Education, Queen’s University Belfast

Background and Purpose
Socialisation and professional identity development in medical students are primary concerns for medical educators. We used student narratives to explore, from a sociocultural perspective, identity construction amongst medical students in terms of their figured and positional identities within the world of medicine 1. Student identity construction will be presented in terms of students’ interactional positioning 2, socio-cultural influences and how they ‘figure’ their identity in relation to the medical community of practice.

Methodology
Six first and five fourth year undergraduate medical students acted as student researchers. They used video to record peer narratives of their journey through medical school. The student researchers identified peers using network and maximum variation sampling (gender, nationality, graduates and undergraduates). Thematic narrative analysis was carried out employing principles of meso-linguistic discourse analysis 3 as sensitising concepts.

Results
A total of 42 semi-structured narratives were recorded. We report here on the first year narratives (n=21). Their decision to study medicine resembled an ‘epiphany’ that was triggered by personal / family ill-health. The world of medicine was figured as an exclusive and elite club. Whereas school leavers described professional identity in performative terms ("acting up"), those who entered medical school as graduates perceived professional identity in more enduring terms and based on their prior experience. Graduate student discourses emphasised their agency in developing oppositional identities, both to society’s perception of medical students as elite, and to being positioned by their undergraduate peers as less capable than school leavers.

Discussion and Conclusions
This study illustrates both the heterogeneity of medical students entering this figured world, and the hierarchical nature of the medical culture in which they are immersed. Medical educators should be cognisant of how the changing composition of the medical student population impacts professional identity development needs.

References
What guides the decision making of clinicians assessing medical students for professionalism on clinical placements?

J Harris
J Harris, Director of Curriculum and Assessment, Imperial College School of Medicine, Charing Cross Campus, Imperial College London, W6 8RP

Background and purpose
Professionalism of medical students is an important topic with the finding that doctors subject to malpractice cases were three times as likely to have displayed unprofessional behaviour at medical school. Assessment of professionalism in medical students remains a particular challenge with a suggestion that it is complex and needs to be assessed at individual, interpersonal and societal levels. Assessors are often uncertain whether they are judging attitudes, values or behaviours and where assessment is based on observable behaviours, there is little research into faculty interpretation of these behaviours. This study aimed to explore what the assessors understand by professionalism, discussing their own professional values and how they make decisions regarding the professional behaviour of medical students.

Methodology
A qualitative pilot study was performed using semi-structured interviews including vignettes. Three clinicians (a Physician, Surgeon and General Practitioner) were questioned about their own professional values and their assessment of medical students. The interviews were transcribed and analysed using Grounded Theory.

Results
The important attributes used by the participants to assess professionalism were:- appearance, attendance, respect for patients, respect for colleagues, honesty, integrity and engagement with learning. The data also revealed three main themes affecting their decision making: 1) Drawing on their own experience as students 2) Influence of role models, 3) Clinician’s role as assessor vs. teacher. They felt the assessment of professionalism was subjective, was easier the longer one knew the student and was often a “gut feeling”. Students were judged in a similar way to junior doctors but given more leeway due to their age.

Discussion and Conclusions
The clinicians saw themselves as role models aiming to guide students and correct poor behaviour during the attachment. They agreed with previous findings that professionalism in clinical years needs to be imparted by good role models. However since they dealt with any issues as they arose, they would often not award a negative report for professionalism at the end of the attachment. This is seen in other Schools where assessors are often unwilling to identify a student as unprofessional for minor infringements. Surprisingly these clinicians were vocal about poor professionalism in other specialities also expressing stereotypical views about student future career choice. These findings suggest assessment of medical professionalism is highly subjective and dependent on assessor speciality. A larger follow up study triangulating assessor data with student views is planned to explore this further.

References
What makes a good Clinical Teaching Fellow?

C Earnshaw, CD Rodd
C Earnshaw, Clinical Teaching Fellow, Gloucestershire Academy, University of Bristol, Gloucestershire Hospitals NHS Foundation Trust, Great Western Road, GL1 3NN

Background and purpose
Clinical Teaching Fellows (CTFs) contribute significantly to undergraduate medical education in a variety of roles from curriculum planning and writing exam questions to tutorial-based teaching (1),(2),(3). They are extremely well received by medical students (2) and such posts are continuing to expand nationally (1),(3); thus a considerable amount of the undergraduate curriculum is taught by CTFs. Multiple studies have previously explored what qualities make a good teacher within medicine as a whole (4) and indeed the GMC emphasises the duty of the doctor to teach (5) but no studies have looked specifically at the qualities of a good CTF. Given the importance of ensuring the delivery of high quality undergraduate medical education, it seems pertinent to identify the desirable attributes that a CTF should possess to be an effective teacher, role model, researcher, trainee and member of the Undergraduate Faculty team.

Methodology
Ethical approval from Bristol University was sought but not required. A survey was distributed online and in paper form to 12 Undergraduate medical education faculty and 79 medical students at Gloucestershire Academy and 46 current CTFs across all 7 Academies at the University of Bristol. Open-ended questions asked participants to consider an ‘excellent’ CTF and list their attributes. The question was also asked regarding a poor CTF. Additionally they identified an outstanding experience or positive encounter with a CTF, as well as a negative experience, and listed the attributes which made it that way. Results were collated onto Microsoft excel and underwent content analysis.

Results
Data collection is ongoing but initial analysis of 60 responses (53% medical students, 29% CTFs, 18% faculty) has been performed. Top attributes of an ‘excellent’ CTF are approachability and enthusiasm whereas ‘poor’ CTFs demonstrate disorganisation and under-preparedness. Positive encounters are reported to be interactive, with CTFs showing a willingness to help. Contrastingly, an ‘unfavourable’ experience occurs when CTFs do not perform assessment of students needs and deliver didactic teaching. Full results will be presented at ASME.

Discussion and conclusions
The 360° perspective of a good CTF can have a positive impact on both the student experience and curriculum delivery. Explicit identification of both the positive and negative attributes of the CTF role can focus person specification and aid interview selection. Once in post CTFs can be assessed and advised to develop their professional practice. Both of these contribute to ensuring excellence in medical education (5).

References
“It’s making contacts”: Notions of social capital and their implications for medical selection and education

S Nicholson, JA Cleland
JA Cleland, Institute of Education for Medical and Dental Sciences, University of Aberdeen

Introduction
Low economic and/or social position relative to others is typically the underlying issue for groups targeted for increased representation within medicine. In the UK widening access (WA) to medicine reflects under-representation from lower socio-economic groups despite numerous initiatives linked to a political rhetoric of inclusive education. This is compounded by a discourse that portrays WA applicants and students as lacking the essential skills or attributes to be successful in medical education. Whether or not this is the case is currently poorly understood as much of the research to date has been weak. However, it is critical to know how WA applicants and students negotiate medical admissions and education as only by understanding this can we inform change.

Methods
In an effort to address this gap, we combined data from three qualitative studies of student experiences of WA to medicine (48 participants in total). Using this amalgamated, larger dataset we inductively analysed the findings using social capital as a theoretical lens to better understand student journeys in medical education.

Results
We inductively created, and clustered, codes into categories informed by the concepts of “weak ties” (Granovetter, 1973) and “bridging and linking capital” (Putnam, 2000; Halpern, 2005). Our data illustrates that WA medical school applicants recognise and mobilise weak ties to create linking capital but, once in medical school, students seem less aware of the need for, or how to create, capital effectively.

Discussion and Conclusion
Our data provides evidence of significant disadvantage for some students from lower socio-economic groups either within their applications and/or during their undergraduate studies. Raising awareness of this is important as medical schools with their inherent preference for meritocracy may not recognise such inequality (Reay, 1998; Lin, 1999). Applying a social capital lens to our secondary analysis of a larger amalgamated dataset has enabled us to think in a more nuanced way about the types of social capital and how possessing social capital facilitates access to valuable information and resources for both medical applicants and students.
WA efforts could be well-served by activities that support increasing the social capital of under-represented students, and future selection policy needs to take into account the varying social capital of students, so as to not overtly disadvantage some social groups.

References
A cohort study analysing medical school performance of students from a widening participation programme.

J Azmy, K Nessa, A Vaughan, A Freemont, D Nimmons
J Azmy, School of Medicine, Stopford Building, The University of Manchester, Oxford Road, Manchester, M13 9PT

Background and Purpose
Widening access to higher education has become a key priority for universities over recent years (1) and is especially important in medicine, a profession dominated by those from higher socioeconomic backgrounds (2). The Manchester Access Programme (MAP) is The University of Manchester’s flagship widening participation initiative targeting under-represented groups at medical school (3). With MAP students forming approximately 5% of the medical student population it is important to understand how these students perform at university compared with non-MAP students.

Methodology
This study analysed and compared the assessment scores of MAP and non-MAP students. All examinations from Years 1-5 were included in the analysis, including the progress test (PT) and objective structured clinical examinations (OSCE). Results for MAP and non-MAP groups were compared for pass/fail rate and percentage scores achieved. The chi-square test was used to test for differences in categorical variables (e.g. pass/fail outcome) between groups, whereas the Mann-Whitney U test was used to test for differences in percentage scores. This study was approved by the University of Manchester ethics committee.

Summary of results
The sample included 2680 students (131 MAP and 2549 non-MAP). In the PT, undertaken twice in Years 1-4 and once in Year 5, non-MAP students attained a higher percentage median score than MAP students with differences ranging from 2-6 percentage points. These differences were statistically significant for each PT ranging from p=0.001-0.05. OSCE’s take place once a year, except in Year 4 where they are taken twice. Non-MAP students obtained a higher percentage median score in most of these exams, with differences ranging from 0-3 percentage points and these were found to be statistically significant ranging from p=0.011-0.05. The exception being in Year 2 where the average score was equal in both groups (p=0.415).

Discussion and Conclusions
Overall non-MAP students performed better in examinations than MAP students but there was less of a significant difference in OSCE performance. Future work would investigate why MAP students perform worse in written exams but better in other types of examinations. The differences may mean MAP students are less well-prepared for such exams and that more focused support is needed throughout university. This may be of most value in Year 1 where marked differences were found.

References
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Differences in perceived stress and coping strategies of high-school and graduate-entry students: an exploratory study in Portugal

F Guimarães, A Araújo, MJ Costa
MJ Costa, School of Health Sciences, University of Minho, Gualtar Campus, Braga, Portugal;

Stress may have a relevant impact on student well-being, mental health and academic development. Medical students may experience high stress levels and may use dysfunctional coping mechanisms. To this date, most reports have addressed stress in “traditional” high school-entry medical students. Since graduate-entry students have previously experienced higher education, they may perceive stress differently and use more positive coping strategies than high-school entry students.

The aim of the present exploratory study was to evaluate whether high-school and graduate-entry medical students differ in their levels of perceived stress and use of coping strategies, in two moments: the beginning of the academic year and soon after the time of the first summative assessment of the academic year.

This was a cross-sectional questionnaire study based on a student cohort. The participants originated from two Portuguese medical schools, one offering only the graduate entry program and the other offering both programs. The instruments to assess stress and coping strategies were the Portuguese versions of the Perceived Stress Scale (PSS) and the Brief Cope inventory. We present results of administrations in the beginning (n = 179) of the academic year and one month later (n=100).

In the beginning of the academic year, there were no differences regarding perceived stress levels between high school-entry (M=16.51; SD=6.52) and graduate-entry (M=15.59; SD=6.01) students, t(177)=.93, p=.354, d=0.15. Nevertheless, the two groups adopted different coping strategies. High school-entry students used more maladaptive coping strategies as self-distraction [t(146,155)=6.04, p<.001, d=0.92], behavioral disengagement (U=2778.00, p=.001, r=0.25), and denial (U=2534.00, p<.001, r=0.28), yet sought support more often than graduate-entry students [emotional support: t(177)=3.16, p=.002, d=0.49; instrumental support: t(177)=2.28, p=.024, d=0.36]. Graduate-entry students made more use of humor [t(177)=−2.92, p=.004, d=−0.45].

The perceived stress levels increased between the two moments and an ANOVA was performed to identify specificities in the evolution of perceived stress of the two populations. No differences were found [F(1, 67) =0.34, p=.56, η²=0.01], suggesting that variations in perceived stress between Times 1 and 2 were not explained by being a graduate or high school-entry student.

In conclusion, the initial perceived stress levels were identical in the two populations. Interestingly, high-school entry students adopted more maladaptive coping strategies than graduate-entry students. The perceived stress of both populations increased similarly during the initial weeks in medical school, which includes the first summative assessment. We further plan to present findings of associations between perceived stress and personal predictors within the same cohort.
Selecting medical students for resilience

LI Lam, G Pinner
LI Lam, 3rd Year Medical Student, University of Nottingham, UK

Background
Medical students are subject to high levels of stress within their undergraduate studies and with the subsequent demands of a medical career. An inability to handle such demands can lead to negative consequences such as burnout which has been well documented\(^1\). There is evidence that resilience is an inherent quality, but that this can be nurtured and developed\(^2,3\). The ability to demonstrate resilience would therefore be a useful characteristic to select for at the point of admissions to medical school. Whilst there is a growing body of research around resilience as a concept, there is a paucity of published qualitative studies exploring resilience in medical students specifically.

Aims
To design a station that would test for resilience as part of a multiple mini interview and to explore the perceptions of resilience amongst a sample of current medical undergraduates and faculty involved in medical student selection at University of Nottingham.

Methods
A task was designed to test for resilience that could be utilised as a station within a multi mini interview having considered the literature. The station was piloted and completed by 10 undergraduate medical students. Participants also completed the Brief Resilience Scale\(^4\), a well-validated measure of resilience to evaluate the construct validity of the station. Semi-structured interviews were conducted with the students and with seven admissions team faculty, to explore perceptions of resilience and its role within medical student training. Data was then analysed using thematic analysis.

Results
Construct validity for the task was low (Pearson’s coefficient -0.343, p=0.332). Thematic analysis of interviews revealed six themes: resilience is seen as ‘bouncing back’; resilience involves knowing when to seek help; resilience is affected by both genetics and environment; resilience is important as medicine is demanding; a lack of resilience in medical students had poor consequences; empathy and resilience can positively affect each other.

Conclusion
Whilst the results showed poor construct validity for this resilience task, many similar selection stations do not undergo any form of evaluation prior to use. Information has been garnered to inform further improvement in developing such a station to allow its use in future selection processes. Exploring the concept of resilience with both students and faculty suggested that it would be useful to select for the resilience at the admissions stage, but also the inclusion of a programme of resilience training during the medical course should be developed and implemented.

References
Six minds are better than one: use of action learning sets to help with planning projects

F Tasker, Clinical Teaching Fellow, North Bristol Academy, University of Bristol Medical School, Southmead Hospital, Bristol, BS10 5NB

Background and Purpose
Action learning is an educational process where people learn together by tackling real issues and through reflection. This approach was first developed by Revans.¹ When action learning is undertaken in a small group, the group is referred to as an action learning set. There is a need for continuous reflection, learning and action to bring about change and this process is underpinned by the cycle of experiential learning.² It is a powerful learning tool because it incorporates many of the principles and theories of each of the five schools of adult learning: behaviorists, cognitivist, humanists, social and constructivist.³ With this in mind, we have created an action learning set to assist with planning our research projects and have evaluated the process.

Methodology
Our action learning set consists of six clinical teaching fellows and a facilitator. During a meeting, each participant has 25 minutes: Five minutes to discuss the progress of their project and to present questions for the group to consider; five minutes for questions from the group to clarify the issues; ten minutes for the group to discuss the project while the person presenting sits out of the circle (they can listen to what is being said but cannot contribute to the conversation); five minutes for the person to rejoin the group and discuss what actions they have come up with. At the end of the group, each member fills in an evaluation form. One member is allocated the role of timekeeper and the facilitator helps the group to work and learn together.

Results
In the evaluation forms, participants highlighted that similar problems arose and that most people had questions about the methodology and evaluation. As a group, members felt that options for solutions were generated and that ‘ideas were bounced off each other’. One member said, ‘it is important to talk about my project to others and adjust details according to feedback’. Other participants wrote the following: ‘I love it, it gives you a forum at each stage of the research project to develop it. Also, gives you targets to achieve’; ‘It is a great process that makes the relationships in the group stronger; we have developed trust between us’.

Discussion and Conclusions
Six people with six different angles help identify the strengths and weaknesses of our projects. We plan to continue to meet throughout the year to further discuss the development of our ideas.

References
The Introduction and Evaluation of an Empathy Specific Entrance Test for Medical School.

MJ Platt, C Salter, G Pounds, P Bryant
MJ Platt. Norwich Medical School, University of East Anglia, Norwich. NR8 6FB.

Background and Purpose
Using empathy, doctors build and maintain the trust of patients and colleagues, thus empathy is seen as a key attribute required of aspirant medical students. However, the ability to express empathy is difficult to objectively measure during the medical school selection processes. To address this, and drawing on an established classification of emotive and evaluative expression (Martin and White, 2005) and a related empathy-specific linguistic framework (Pounds, 2011), the research team developed a testing tool to assess applicants’ ’empathic performance’, suitable for use as a multiple mini interview (MMI station).

Methods
Following extensive development, a Multiple Mini Interview (MMI) station using commissioned video clips were used to elicit the reaction of aspirant medical students and added to the usual MMI circuit. Eight different clips using four scenarios, with either a male or female actor were used on rotation for 600 interviews. Data from interviewers were used to assess the acceptability of the station.

Results
Preliminary analysis of the first 140 interviews included exploratory factor analysis, demonstrating that the station added a new dimension to the selection process. While 60 (42%) of those assessed scored similar marks on both stations designed to assess empathy, 32 (23%) had markedly different scores in the 2 stations. There is a suggestion that girls perform better on the new station. Analysis will be repeated when the 2015-6 interview cycle is completed (March 16), and will include exploring the relationship with UKCAT-SJT score, interviewee demographic variables, changes in interviewee performance over time (as awareness of this new style station is disseminated), impact of new station on probability of receiving an offer, and the relationship between the gender of the applicant and the gender of the actor.

Discussion and conclusion
This test has made it possible to assess more directly empathic ‘performance’ rather than rely on reported (and hence prepared) examples of empathy, thus making assessment of empathy more equitable.

Use of the Competitive State Anxiety Inventory-2 (CSAI-2) Tool to Examine the Relationship of Anxiety and Performance in Multiple Mini-Interviews for Applicants to Dundee Medical School

K McConville
K McConville, Senior Clinical Teaching Fellow, University of Dundee, School of Medicine, Undergraduate Dept. of Tayside Centre for General Practice, Dundee, DD2 4BF

Background and Purpose
In 2010, Forrest et al1 described a training strategy based on the Competitive State Anxiety Inventory-2 (CSAI-2) that could be used to help medical students prepare for an OSCE. This workshop stimulated the research questions into the potential use of the CSAI-2 as an indicator of future medical student performance under pressure.

Methodology
This research examined the correlations between the CSAI-2 domain scores and the performance and demographic data in the multiple mini-interviews (MMI) of students applying to the University of Dundee Medical School. Following ethics approval, all students from the 2012 cohort of the MMI interviews at Dundee were invited to participate in the research. Data was collected over an eight-day period in January and February 2012 with 433 students electing to partake in the research.

Results
The results of Cronbach’s α for the three CSAI-2 subscales scoring for cognitive anxiety, somatic anxiety and self-confidence during the MMI were 0.804, 0.816 and 0.822, respectively. This confirms that the CSAI-2 tool can be reliably applied in the context of the MMI in the same way that it is currently used in sports psychology. There were no statistically significant correlations with age or adversity scores, nor for the four elements of reasoning which are part of the aptitude testing within the UK Clinical Aptitude Test2. Additionally, there was no statistically significant correlation for the overall MMI final score when taking into account whether the MMI stations were interactive or one-to-one events. With respect to gender, in the areas of cognitive anxiety and self-confidence there was a statistically significant association for females when compared with males (p <0.01) for both cognitive anxiety and its directionality effect. Female students also reported statistically significant (p <0.01) lower levels of self-confidence.

Discussion and Conclusions
The major findings from this research suggest that the CSAI-2 can be equally applied to the MMI with respect to the states of anxiety and self-confidence. It supports evidence reported previously that indicates female cognitive anxiety and self-confidence has a statistically more significant effect on their performance compared to their male counterparts3. It informs MMI assessors that there is no direct relationship between the anxiety of the student and how they may perform in the MMI at Dundee. Finally, on a one-to-one basis, the CSAI-2 provides individual student data that may assist medical educators in designing a framework to aid future OSCE performance.

References
2. UKCAT C. The UK Aptitude Test (UKCAT) For Medical and Dental Degrees. Secondary The UK Aptitude Test (UKCAT) For Medical and Dental Degrees 2013. http://www.ukcat.ac.uk.
Values-Based Recruitment for Nurses and Midwives: Are MMIs the solution?

M Traynor, D Galanouli, M Roberts, T Gale
M Traynor, Director of Education, School of Nursing & Midwifery, Queen's University Belfast, Medical Biology Centre, 97 Lisburn Road, Belfast, BT9 7BL

Background and Purpose
The challenge for any academic institution training future nurses and midwives is to select students who have those values and personal attributes best suited to such a professional course. This was made more imperative following the publication of the Francis report (2013)\(^1\) and the suggestion that the poor standard of care in hospitals were partly due to the fact that staff did not have the right values or the appropriate levels of professionalism. The study reported here took place in March 2015 and aimed to trial the Multiple Mini Interview (MMI) approach to recruitment with a group of first year nursing students (already selected using traditional interviews) as a requirement of the institution’s Admissions, with a view to replace the existing interviewing process from 2016. The MMI, developed by Eva and his colleagues in McMaster in 2004\(^2\), consists of a number of short stations designed to test specific competences, each station with a different examiner, making this a fairer process.

Methodology
Out of a cohort of 318 nursing students, 110 volunteered to participate in a study to evaluate the MMI method. Thirty two interviewers were drawn from both academic and clinical staff. A mixed approach was employed. Student (n=110) and interviewer (n=26) questionnaires and also the results from the seven MMI stations, along with the students’ original interview scores were used to evaluate the MMI process. Group discussions were also conducted for triangulation purposes.

Results
Results indicate that the majority of students found the MMI a positive experience (86%) and one that helped them demonstrate their understanding of practical skills (71%) better when compared with their own interview for the course. Interviewers thought the MMI tested a wider range of applicant attributes than the traditional interview (92%) and that it is an appropriate way of assessing nursing applicants (81%). Further statistical analysis showed, among other, that there was no significant variation in MMI scores by gender, disability status or cohort group; age was found to be the only statistically significant predictor of the MMI score (p=0.008) though the effect was small.

Discussion and Conclusions
As a result of this pilot study the University has approved the introduction of MMIs for admission to Nursing and Midwifery degrees from March 2016. It is expected that this new recruitment method will ensure admitting the best nursing candidates not only academically but also those with the attributes and values best suiting the nursing profession. This will form the basis of further longitudinal research.

Teaching About Specific Subjects
Supporting Out of Program Trainees: establishing a ‘Return to Acute Paediatrics’ course in Northern Ireland

N Kirk, L Thompson, N McCay
N Kirk, ST3 Paediatric Trainee, Northern Ireland Deanery.

Background and purpose
In each rotation, up to 25% of Paediatric trainees in our deanery may be out of programme, (OOP) most commonly for maternity leave. Trainees can feel anxious, de-skilled and under-confident on returning to work. However, there is little evidence describing these difficulties and limited targeted support available for OOP trainees within our deanery. We aimed to identify the needs and concerns of trainees returning to clinical work after a period OOP and develop a course providing education and support for these trainees.

Methodology
We conducted a literature review of recommendations and current practice in deaneries and colleges throughout the UK. An online questionnaire was constructed and sent to all Paediatric trainees within our deanery to identify issues encountered surrounding time OOP. We developed a ‘Return to Acute Paediatrics’ course. A half-day pilot course was held in July 2015 with all trainees currently OOP invited to attend. The programme included short lectures on ‘Hot topics in Paediatrics’ and Neonatal/Paediatric simulation. The effectiveness of the programme was assessed using pre- and post-course questionnaires, (using Likert scales and space for additional comments.)

Results
7 trainees attended the pilot course (ranging from ST1-ST8.) All trainees were OOP due to maternity leave. 100% of trainees completed pre-and post-course evaluations. Feedback from the questionnaires was positive, with all trainees rating the course as ‘excellent’ and 100% of trainees reporting improved confidence in managing acute scenarios. Our online questionnaire found that many paediatric trainees within our deanery, who had experience OOP, had concerns returning to work and felt this course would be beneficial in addressing some of those concerns.

Discussion and Conclusion
Returning to clinical practice following time OOP can be difficult and there is currently no targeted educational support available for paediatric trainees in our region. Our pilot ‘Return to Paediatrics’ course was popular with trainees, resulting in improved confidence in managing acute paediatric scenarios. The post course feedback along with online questionnaire results was used to develop a full day bi-annual course, which has been formally approved by our School of Paediatrics. It is available to all Northern Ireland Paediatric OOP trainees aiming to facilitate a less daunting return to acute Paediatrics.

References
Teaching and consolidating prescribing skills for final year medical students: a community based workshop approach

A Panesar, D Blanchard
A.Panesar, Clinical Teaching Fellow, School of Medicine, Keele University, U.K.

Background and purpose
From 1 August 2016, all foundation doctors are required to pass the Prescribing Safety Assessment (PSA) before commencing clinical practice. The PSA website explains “Prescribing.... is a complex task requiring knowledge of medicines and the diseases they are used to treat, careful judgement of risks and benefits of treatment, and attention to detail.”

A team-based learning approach may be an effective means of teaching clinical pharmacology1. Final year medical students at Keele spend 15 weeks in primary care, and students at neighbouring GP practices already meet weekly for self-directed learning in cluster groups of around 6 students. Primary care is a setting where students are very likely to encounter challenges associated with polypharmacy, and other prescribing issues.

Educational innovation
Several cluster groups are combined to form a “super cluster” with an average of 15 students. This super cluster meets for one intensive 3 hour workshop, held on local surgery premises and led by a local general practitioner.

Teaching materials for these have been developed by primary and secondary care academic clinicians, and encompass prescribing competencies identified by the GMC2. Activities cover various issues including advantages and disadvantages of using generic and brand names for therapeutic agents, clinical challenges involved in contraception prescribing, clinical decision making in analgesia prescribing, and use of FP10s.

Evaluation
We are collecting feedback from students, to determine self-reported impact on confidence in prescribing, asking for two main learning points and suggestions for other areas they wish to cover. Tutor evaluation is also being collated.

Results
Examples of teaching activities and feedback received will be shared. Preliminary findings indicate students have increased confidence post workshop.

Discussion and conclusions
We believe team based learning in intensive workshops, led by experienced primary care physicians in the community, can improve student skills related to pharmacology and prescribing relevant to the F1 Year.

References
2. GMC Tomorrow's Doctors (2009)
QR codes versus Augmented Reality for students starting clinical placement

YYS Ho, D Alder, C Earnshaw, Z Hossenbaccus, J Hawkins, H Chant, N Oxlade, P Davies, CD Rodd.
YYS Ho. Redwood Education Centre, Gloucestershire Royal Hospital, GL1 3NN

Background and Purpose
Medical students starting their first clinical placement may find the change of learning environment stressful. Hospital inductions are intended to reduce anxiety for the students. Ward found junior doctors would appreciate familiarisation to the new environment early in the hospital induction. Mobile devices are second nature to medical students and could aid them settle in the hospital environment. Quick response (QR) codes are similar to barcodes and allow mobile users to convert a code into text or direct to a web page. In contrast, with augmented reality (AR) a mobile camera recognizes a 2D or 3D image and implants videos related to the image onto the mobile device. AR has been introduced to an undergraduate Dental school’s prospectus where students can easily access information about the course.

We have created a self-guided tour of the hospital akin to a treasure hunt. The students will be guided to a series of locations in the hospital, for example the pharmacy and outpatients. At specific locations, there will be QR/AR codes for students to scan onto their mobile devices, thus provide detailed information about each department.

The aim of this study is to evaluate medical students’ experience of QR and AR for hospital orientation.

Method
Twenty-eight 3rd year medical students were randomly assigned into three groups at their hospital induction in Gloucestershire NHS Trust. Group A is the control group and the participants underwent a tour of the hospital led by a member of the undergraduate faculty. Group B participated in a self-guided tour using their mobile devices to scan QR codes. Group C participated in the orientation tour using their mobile devices to activate AR.

Results
Likert scale and free-text questions were used in the post induction evaluation forms. We will explore the students’ previous experiences of induction and compare the practicality, enjoyment and perceived usefulness of using QR codes, AR and a faculty led tour of the hospital.

Discussion
Taking large groups of medical students on a tour of the hospital require manpower and more importantly, it is passive and mundane experience for the students. Staunton et al reported the current hospital inductions for junior doctors are uninspiring. QR codes and AR would allow the students to be self-directed and take on a more active role in orientation.

References
Real-Time Curriculum Mapping by Students as a means of Evaluating a Hospital-Based Clinical Attachment

J Offer, S Tilson
S Tilson, Undergraduate Department, Queen’s Medical Centre, Derby Rd, Nottingham NG7 2UH. stephen.tilson@nuh.nhs.uk

Background
Medical Students are exposed to a vast amount of disparate educational experiences in a hospital environment. The assumption is that given enough exposure to these different educational opportunities, the whole curriculum will be covered, and the students will have been able to organise all their acquired clinical knowledge to enable them to pass assessments and become competent foundation doctors. Whilst medical school curricula tend to provide well-established, detailed objectives the degree to which different educators follow these will inevitably be variable, and there is a lack of standard methodology to manage the content of a busy curriculum. Outcome measurement and program evaluation of individual clinical placements are very difficult, and tend to rely on student’s self-assessment and satisfaction ratings – both of which have poor correlation with external performance data. The value of curriculum mapping is well established, and curriculum mapping has been used previously as a means of evaluating a variety of health education interventions, although it is seen as time and resource intensive.

We wanted to see if it was feasible to get students to map their teaching sessions and educational opportunities to the curriculum in real time (i.e. as they are taught), and if this could provide a more reliable, detailed evaluation of a hospital-based placement.

Methods
We asked for volunteers from the groups of “Clinical Phase 3” University of Nottingham students undertaking their 8 week Medicine attachment at the Queen’s Medical Centre in Nottingham. These volunteers were given an electronic copy of their curriculum, and asked to spend time each day recording which objectives they judged had been met that day. In addition we asked them to record the nature of the session in which each objective had been covered – e.g. consultant teaching, ward work etc.
At the end of the attachment, students returned their electronic curriculum and the results were collated using Microsoft Excel. The volunteers also filled in a brief questionnaire on their involvement in the process.

Results and Discussion
7 students have taken part in the project across three ‘Medicine’ attachments. We have already been able to use results to identify gaps in the curriculum. We are still awaiting the results from our current attachment – due to end in February 2016 – and the full results will be presented during our oral presentation.

References:
Workplace empowerment in surgical training posts

Z Oliphant, E Papworth, J Coulston
Z Oliphant, Weston General Hospital, Grange Road, Uphill, Weston-Super-Mare, BS23 4TQ

Background and Purpose
A recent BMA survey (1) reported that morale amongst junior doctors is falling. 29.6% junior doctors reported their workload was unmanageable or unsustainable. A local GMC survey of foundation doctors on surgery cited some concern from juniors regarding poor support overnight and poorly managed ward rounds. ‘Empowerment’ describes the management’s ability to create a working environment that motivates positive work behaviour (2). Empowerment may reflect the quality and culture of training within surgical posts. The management and trainers’ ability to foster empowerment may affect training outcomes and trainees’ engagement with their training post.

Method
The Conditions of Work Effectiveness Questionnaire (CWEQ-II) (3) is a validated tool assessing 6 components of structural empowerment including opportunity, information, support, resources, formal power and informal power. It uses a Likert scale ranging 1-5 (5 is most empowered). It was distributed via an online survey using ‘SurveyMonkey’ to surgical trainees in Health Education South West. It was also distributed to foundation trainees at Musgrove Park Hospital. Foundation trainees in surgical placements were included.

Results
39 trainees including 32 surgical trainees and 7 foundation doctors in surgical posts responded to the survey. 31 trainees completed the whole survey. Surgical trainees ranged from CT1-ST8 level and worked at 11 hospital sites for 11 surgical subspecialties. Opportunity scored most highly (mean 4.0) and information lowest (mean 2.46). The mean score for access to support was 3.40 and the mean score for access to resources was 3.12. The highest scores for any components of empowerment were ‘the chance to gain new skills and knowledge on the job’ (4.05) and ‘challenging work’ (4.02). The lowest score was for understanding salary decisions (1.79). The mean formal power score, including rewards for innovation, amount of flexibility and visibility of work was 2.74 and the mean informal power score, including collaborating with colleagues, was 3.17.

Discussion and Conclusions
Surgical trainees report high levels of empowerment in their opportunities for training but feel poorly informed about the structure of their organisations. Further study is needed to explore foundation doctors’ experiences of training within surgical firms. Understanding trainees’ sense of empowerment in different aspects of their work may allow trainers and management to foster an environment in which trainees feel empowered to work and learn.

References
Technology Enhanced Learning
The Prompt Pilot Study: Qualitative analysis of an online intervention to promote physical activity in medical students

C Neill, K McGlade, M Tully
C Neill, Department of General Practice, Queens University, Belfast

Background and purpose
The health benefits of regular exercise are clearly recognised. As it is suggested that doctors are prepared to address lifestyle changes with their patients, it is important that they aim to achieve better health outcomes themselves. The interplay between physical activity (PA) as students and subsequently as doctors, and the additional influence that physically active doctors may have on their patients is thus of interest. Despite this, little work has focused on how to encourage medical students to do more exercise. Education and training in PA in UK medical schools has been reported as inadequate. This pilot study, incorporating the processes of a randomised-controlled trial, sought to determine the effects of a simple online prompt on reported student exercise behaviour.

Methodology
A “fitness button” was added to the Virtual Learning Environment used regularly by third-year medical students, aiming to “prompt” them to take exercise. Third-year students were recruited at an introductory lecture. Thirty-five agreed to take part and were randomised to intervention and control groups. Both groups received pedometers to measure daily step-counts. The intervention group were exposed to the online exercise prompt. Students completed a questionnaire documenting their attitudes to PA and knowledge of current guidelines. All students were then invited to take part in focus groups which aimed to elucidate any attitudinal or behaviour changes, with respect to exercise, which students attributed to the effect of the prompt or the pedometers.

Results
Of the 35 students who started the study, 20 returned pedometers and participated in focus groups. We report on the qualitative results here. From analysis of the qualitative data, four broad themes emerged: Perceived effects of (a) pedometers and (b) the online prompt on exercise behaviour, (c) ideas about alternative methods for encouraging exercise in students and (d) student thoughts about conveying exercise and diet information to patients. Students were able to give practical examples of how recollection of the online prompt had changed their daily exercise habits.

Discussion and conclusions
An online prompt coupled with students’ regular education materials could prove an efficient and effective way of getting students to think about exercise. Students explained how their behaviour had been changed in small ways to increase their PA. This was a minimal intervention. It is possible that the prompt coupled with online facilitated peer participation could be even more effective.
‘#SixSecondStudying’: The use of the Vine application as a tool in medical education

J Guckian, J Spencer, S Maitland
J Guckian, 49 Sanderson Road, NE2 2DR

Background
There exists a wealth of ‘Web 2.0’ resources, including social media, podcasts and wikis, which offer new methods of learning in undergraduate medical education. [1] There is evidence of medical educators using social networking to supplement a novel curriculum. [2] Twitter is a microblogging service, which involves sharing 140 characters of text, boasting 284 million monthly users. The application ‘Vine’, allows the sharing on Twitter of six second long videos. These loop, on repeat, and are embedded into websites and social media. Prior to this study, Vine had not been documented as being used in medical education.

Method
Sixty-nine Vine videos were designed, in a series called ‘#SixSecondStudying’. These covered basic clinical topics and were shared on the Twitter account for Newcastle University Medical Education Society (@MedEdNcl). Topics were identified in a focus group with current 4th year medical students at Newcastle University. Video views were counted, alongside changes in the number of followers of the @MedEdNcl account. This data covered the period of Oct 6th 2014- January 23rd 2015. Questionnaires were sent to users of MedEdSoc Newcastle’s mailing list, assessing the ease of use and relevance of the videos.

Results
The #SixSecondStudying videos were viewed 76,564 times. The @MedEdNcl account increased its number of followers from 833 to 1,011. The questionnaires received 100 responses. 91% of users believed the #SixSecondStudying videos were easy to use. 80% felt the series was a ‘relevant revision aid’. whilst 91% indicated that they would recommend #SixSecondStudying to a friend as a revision aid.

Discussion
This study has demonstrated that videos produced using Vine can be a popular learning tool for medical students. We have shown that the relevance and ease of use of a series such as #SixSecondStudying are key reasons for the use of such an application. Further employment of the Vine application with the focus of improving collaboration may yield more benefits to learning and, alongside the use of Twitter, offers potential to support a traditional medical curriculum.

References:
Google Apps for Education: the Abstracted Virtual Learning Environment (VLE) for Medical Education

J Toomey, K Brandom, R O’Brien.
J Toomey, Educational Technologist, University of Exeter Medical School, St Luke’s Campus, Exeter, Devon, EX1 2LU.

Background & purpose
A significant challenge faced by the University of Exeter Medical School (UEMS) Technology Enhanced Learning (TEL) department is enabling non-technical staff to use complex web technologies for communicating and collaborating with students quickly. David Wiley suggests that the e-learning community has suffered an “...engineer invasion...” and our logical maxim for adding pedagogical value to our learning resources should be “...simple wins...”. ¹ Google Apps for Education enables educators to create responsive websites and collaborative workspaces quickly without coding, database interaction or technical support through a process of abstraction.² In an effort to simplify instructional design and improve the student experience, we have moved our flagship Medical Programme from a Moodle based platform to an almost entirely Google Apps based platform. This study will evaluate the differences and advantages of this migration and gather data on whether the move to a commercial platform has added value to our online curriculum. The study will examine and compare Moodle and Google app’s tools in the following aspects; Design, navigation, usability, adaptability, plugins, community.

Methodology
Conclusions will be developed by comparing web analytics data between the two systems and UEMS TEL will also be running a number of internal Google Apps training sessions for staff, this will be an opportunity to gather information from academic, clinical and support staff on the usability of Google Apps and how it affects their workflow.

Third year students on the BMBS programme at UEMS have experienced both the Moodle based VLE and the Google Sites platform. We will gather data from students in their second and third year to draw a comparison to their experience with Google Apps and Moodle. We will also gather data from the first year students to quantify their experience of the Google Apps based VLE.

Results
The migration to Google Apps for Education from Moodle is a measured success for a number of reasons; the tools provided enabled and empowered educators and instructional designers with adaptable and intuitive tools that are able to expand far beyond their primary use. The Google Sites interface and search tools greatly increased the speed of which content could be shared and found by educators and students.

Discussion & conclusions
This study would also suggest that enabling students with tools to create their own virtual learning experience through interaction and social networking media increases not only increases engagement with the medical curriculum but enhances digital literacies.

References
Background and Purpose
Medical educators are beginning to adapt social media platforms to both support and deliver educational content. However, the availability of empirical evidence to support the use of social media tools in medical education is problematic\(^1,2\).

The aim of this study is to identify the current state of the art of using social media in medical education settings. Then it will identify the recognised educational and ethical implications of that use. This will be achieved by conducting a systematic review of the literature identifying evidence required by educators to make informed decisions on the use (or not) of social media in undergraduate medical education.

Methodology
This study has been conducted as a scoping literature review as per the classification set out by The Best Evidence and Health Professional Education (BEME) Collaboration\(^3\).

Results
There is a clear view amongst the authors whose work was reviewed, that using social media conveys some benefit, but it is far from clear whether any benefit is due to increased knowledge, increased social skills, or a feeling of incorporation into a community of discourse.

Conclusions
There is benefit to be obtained from educationalist using social media platforms that are already a major element in their student’s lives, even if the benefit is in helping to cement engagement with the learning community.

References
Using Video Feedback in Assessment – is it Fair, Feasible and Effective?

H Knowles, S Lovato, C Anele, A Jethwa, J Shah, A Southgate, A Sharif
H Knowles, Surgical Teaching Fellow, Undergraduate Department, Northwick Park Hospital, Watford Rd, Harrow, Middlesex HA1 3UJ

Background
Video-enhanced feedback can be useful in clinical skills teaching\(^1\), and has been shown to be acceptable to students\(^2\). However, being videoed can promote anxiety\(^3\). We looked at introducing video feedback into formative assessment. This could have benefits aside from improving learning. It gives a record of the assessment for standardisation, and using videos could remove the need for in-room examiners. We ran a pilot study to assess whether video feedback during assessment was acceptable to students, could be carried out with the resources available, and was beneficial for development of clinical skills.

Methodology
During OSCE-style formative assessment, twenty third-year medical students were randomly allocated to video feedback (ViF). Fifty other students were in the verbal feedback group (VeF). During the clinical skills station (venous cannulation) ViF students were recorded with an iPad, which all students are given by the College. During a five minute feedback session, all students received verbal feedback. ViF students also watched their video with the assessor commentating. Fifteen students from each group were invited back to repeat the skill under simulated conditions, and complete a questionnaire.

Results
Twelve students from ViF and eight students from VeF attended the second session. The skill performance was scored, and this was compared to the assessment score. There was no significant difference in the change in score between groups. One student from each group failed to fill the questionnaire. Four students (36%) said that being videoed made them more nervous during assessment. The median 'nervousness' score for ViF students was 6/10 compared to 5/10 for VeF. Of video students, 100% (11/11) said that they would choose to be videoed in the future, compared to 29% verbal (2/7).

Discussion and conclusions
The use of one video session was not shown to have any effect on competency in this small sample size. ViF students had positive experiences of being videoed, even if the process made the assessment more stressful. Interestingly, desire to use the technique again was unanimous in ViF, but less so in VeF. This suggests that perception of the usefulness of video feedback is at odds with the reality of using it. Recording with iPads was quick and easy, and students could review their video again, which all of the ViF students did. Given the positive feedback and ease of use, we are introducing video recording into clinical skills sessions, and will assess the educational value once in place.

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Ethical reasoning through simulation: A phenomenological analysis of student experiences

G Lewis, M McCullough, AP Maxwell, G Gormley
G Lewis, Centre for Medical Education, Queen’s University Belfast (QUB), 97 Lisburn Road, Belfast, Northern Ireland, BT9 7BL

Background
Medical students transitioning into professional practice feel underprepared to deal with the emotional complexities of real-life ethical situations [1]. There is a need to build on work that helps prepare students to navigate ethical quandaries in clinical practice. The use of simulation-based learning (SBL) may provide a safe environment in which students can probe the boundaries of true-to-life ethical encounters [2]. The few published attempts at authentic ethics simulation have not generated sufficiently deep accounts of student experience to inform pedagogy [3-5]. We wished to understand the fine-grained nuances of students’ lived experiences as they engaged with the dynamic clinical, social and emotional complexity of managing ethical dilemmas within a SBL environment.

Methods
This qualitative study was underpinned by a social constructionist epistemology and phenomenology was used as a theoretical lens. Fourth year medical students at QUB were invited by email to participate. As is typical in studies using phenomenology, eight subjects were recruited. They participated in an interprofessional ward-based SBL activity in which they played the role of a first year junior doctor. A series of ethically challenging encounters, involving multiple parties, unfolded whilst the students performed a clinical task. Student participants wore digital video glasses to capture point-of-view (PoV) film footage during the simulation. All participants were interviewed immediately after the scenario and the PoV footage played back to them. Interviews were transcribed verbatim and a template analysis approach was used to qualitatively analyse the data.

Results
Four main themes emerged from the analysis: ‘Authentic on all levels?’, ‘Letting the emotions flow’, ‘Ethical alarm bells’ and ‘Ghost in the machine’. Whilst students recognised many of the explicit ethical dilemmas during the SBL activity they had difficulty navigating more subtle ethical and professional boundaries. In emotionally complex situations several instances of moral compromise were observed (such as telling an untruth). Some participants felt unable to raise concerns or challenge unethical behaviour within the scenarios due to prior negative undergraduate experiences.

Discussion
This study provided insights into medical students’ immersive and embodied experiences as they explored the intricacies of ethical reasoning during an authentic SBL activity. By layering on many of the human dimensions of applying ethical principles students can understand their personal responses to emotion, complexity and interprofessional working. This could assist them in framing and observing appropriate ethical and professional boundaries and help smooth the transition into clinical practice from medical school.

The Virtual Toddler: A comparison of blended learning using a virtual simulated patient, eLearning, and traditional didactic teaching of paediatric development to undergraduate medical students.

E Keeling, E Gunning, S Mountjoy, E Meinert, T Bennie, E Metters, S Kumar
E Keeling, Clinical Teaching Fellow Department of Primary Care and Public Health, 3rd Floor Reynolds Building, Imperial College London, St Dunstans Road, London W6 8RP

Background
Paediatric child development is a key component of undergraduate and postgraduate Paediatric curricula. Traditionally, as at our institution, this is taught didactically with additional limited opportunities for paediatric development clinic attendance. The literature suggests that learning this skill is best facilitated through experiential learning (1), and students consistently perceive child-student interactions as most useful. However, ethical and practical issues limit this as a tool for providing consistent, regular teaching(1). As student numbers increase, this problem intensifies. To overcome these limitations, we have developed a novel session which simulates a child developmental assessment using facilitated, group eLearning: a blended learning approach. We have built upon previous ideas(2), incorporating reflexivity so that students lead the examination of a virtual simulated patient (VSP). Blended learning has been shown to improve medical student newborn examination skills (3), but evaluation of virtual patients and blended learning to teach paediatric clinical skills is limited in the literature.

Methods
We intend to compare the efficacy of child development teaching delivered through our blended session with eLearning or a traditional lecture alone. Year 5 Paediatric students all attend an initial lecture on child development, and a final general paediatric lecture at the end of the rotation. After each lecture, knowledge of developmental assessment will be assessed with an MCQ assessment. The results of 3 groups of students will then be evaluated: Group 1 will also attend the VSP session during their rotation; group 2 will independently complete online the eLearning component of the VSP session only; group 3 students only attend the lecture. We will hold a focus group for Group 1 students, and groups 1 and 2 will also complete a post-activity questionnaire.

Results
- We will compare:
  - Post-lecture and end-of-course MCQ results for each group.
  - Qualitative questionnaire results assessing attitudes and satisfaction from the eLearning and VSP sessions.
- We will assess student satisfaction and attitudes towards the novel VSP session in the focus group.

We will present our session and the preliminary results.

Discussion
Our novel approach blends eLearning and small-group facilitated teaching within a session. Virtual simulated patients and blended learning may standardise learning experiences, increase access to child development cases, and could be generalizable to other areas of medical education, thus providing an alternative method when the participation of patients proves challenging.

References
Engaging Observers: Can the use of an audience response system (TurningPoint®) in medical student simulation sessions improve observer engagement and learning?

J Hawkins, C Earnshaw, Z Hossenbaccus, YYS Ho, CD Rodd
J Hawkins, Clinical Teaching Fellow, Gloucestershire Academy, Gloucestershire Royal Hospital, Great Western Road, Gloucester, GL1 3NN

Background and Purpose
Simulation-based medical education (SBME) is an important part of clinical learning and medical students find simulation teaching an effective way to learn. However, few studies look at engagement of the student observers whilst their peers participate in the simulation. Audience response systems (ARS) involving 'clicker' devices are used frequently at higher education establishments and are useful, simple and engaging. The aim of this study was to investigate whether engaging the observer with questions and an ARS response facility is a valuable learning initiative in SBME.

Methodology
A crossover study was conducted involving third year medical students from Gloucestershire Academy. During a 3 hour simulation session, Group A observed their peers and used the ARS while Group B observed their peers as per normal. The questions were displayed on a laptop visible to the observers only. They used an individual ARS ‘clicker’ to answer questions on previously taught content being applied in the scenarios. The groups crossed over after a few weeks later to receive the other format but with different scenario content. Both sessions were run by the same facilitator. All students were invited to complete pre and post session 7-point Likert scale and open text evaluation forms. They also completed pre, post and recall knowledge tests.

Results
Using the ARS in the observer role improved the students understanding of the topics (0.56 point increase, p<0.05). Quantitative and qualitative data indicates the ARS was engaging, interactive and held the students attention better (0.49 point increase). The ARS was agreed to be beneficial by 89% (15/17) and 77% (13/17) felt it reinforced the teaching. There was equivocal knowledge gain between the groups. The anonymity provided by the ARS was liked by 77% (13/17) and 53% (9/17) would prefer to use the ARS over being assigned a role.

Discussion and Conclusions
Simulation-based medical education (SBME) and audience response systems (ARS) are both important and useful resources in medical education. Combining them to improve observer experiences in simulation has shown to be engaging, interactive, attention focusing and beneficial in reinforcing learning. It was difficult to assess knowledge gained and this is probably not the right use for the ARS. However, we feel there is particular potential for ARS in SBME for human factors teaching. The anonymity allows freedom to provide honest feedback and aid the debriefing process. We intend to investigate this use of an ARS further with human factor scenarios.

References
Multi-professional training through simulation – an undergraduate perspective

S Bulford, C Marshall, C Kirby, I Cooke, E Stevens
S Bulford, Honorary Clinical Teaching Fellow, School of Medicine, University College London, Gower Street, London WC1E 6BT

Background
Historically, healthcare students have been educated in separate learning environments. Whilst this remains, there is increasing post-graduate attention given to the merits of engaging in multi-professional learning\textsuperscript{1,2}. Equally, the importance of human factors involved in patient care are becoming more valued. Undergraduate healthcare students are infrequently afforded tuition within high fidelity, multi-professional training moulages, but simulation grants students this opportunity whilst specifically focusing on the human factors of working within such an environment.

Methodology
During their final year placement at The Lister Hospital, Stevenage, medical and nursing students jointly undertook one 4-hour simulation session. Within these sessions, students would manage the unwell mannequin patient in the same way they would on a ward, utilising real equipment in real time. Students not participating in the scenario watched via live video link. Feedback was given from the observing peers and the multi-professional faculty tutors. In order to evaluate the effectiveness of this high fidelity, inter-disciplinary training, students complete pre- and post-session free space feedback forms. Results were then analysed and mapped using Pope and May’s thematic framework technique.

Results
One hundred and twenty-seven students completed both surveys, of which 98 were medical students. The training was universally well received. Concerning pre-session expectations, students stated they hope to garner increased confidence in the systematic management of an acutely unwell patient. They also hoped to increase in confidence concerning handover to a fellow clinician, and in working within an inter-disciplinary team; all of which would prepare them for post-qualification work. Concerning the post-session questionnaire, all students felt their expectation were met. Students commented that the live video link was helpful in providing considered feedback, and the multi-professional tutor faculty offered a variety of learning perspectives – students felt very supported. Students commented that working as part of a doctor-nurse team was useful practice which would alter their behavioural interactions in future.

Discussion
Whilst simulation training is not new\textsuperscript{3}, we believe we offer a multi-professional student training experience which confers significant benefit to a training clinician. There are limitations to our study, one of which is the paucity of nursing student feedback. This is partly due to poor nursing attendance and equally poor completion of the feedback form. We are also yet to establish the long-term benefits of this intervention as we do not have feedback from qualified participants who have undertaken this training. We hope to address this in future and further develop this undergraduate educational intervention.

1- Bradley, P. 2006 'The history of simulation in medical education and possible future directions', Medical Education, 40 (3) pp254-262
2- Ker J, Mole L and Bradley P. 2003 'Early introduction to interprofessional learning: a simulated ward environment' Medical Education 37 pp.248-255
3- Issenberg SB, McGaghie WC, Petrusa ER, Gordon DL and Scalese RJ. 2005 'Features and uses of high fidelity medical simulations that lead to effective learning: A BEME systematic review' Medical Teacher 27 (1) 10-28
Saving Lives Through Skype: Remote Debriefing– a new paradigm for low resource hospitals in the Developing World?

AM Meaklim
A M Meaklim, PG Diploma Clinical Education, Plymouth University, Drake Circus, Plymouth, Devon PL4 8AA

Background and Purpose
In Kenyan rural hospitals, junior doctors often face medical emergencies alone; scenarios that are typically complex and chaotic to manage prove even more daunting with an absence of senior support and feedback on their performance. Proficiency in accurately assessing one’s own performance and learning to reflect on tasks performed are important skills in improving clinical practice and identifying system constraints1. I established a novel approach of review of a simulation in Nanyuki Hospital, Kenya, providing feedback from senior clinicians (trained in giving feedback) in the UK using Skype.

Methodology
A mixed ethnographic and digital ethnographic study has been designed, facilitating a holistic approach to exploring understanding of phenomena from a perspective that is not amenable to quantitative methods and assess sustainability in this cultural context. Online data is being triangulated by conducting off-line ethnographic observations at Nanyuki Hospital. WhatsApp was used to organise a low-fidelity simulation with the Kenyan doctors, which was filmed in Nanyuki Emergency Department using their hospital’s laptop webcam. The internet availability in Kenya is good, even in rural areas 2. Using the file hosting service Dropbox, the video was uploaded. The use of freemium voice-over IP service Skype made expert advice from the UK available. A consultant anaesthetist specialising in medical education, a senior pharmacist and myself watched the videos, with the Kenyan doctors also scrutinising their performance on their laptop. Formative feedback was used, focussing on encouraging reflection of human factors and discussing system restraints encountered.

Results
Preliminary data was gathered by transcribing semi-structured interviews verbatim, with non-verbal expressions also scrutinised. The Kenyan junior doctors found remote debriefing to be motivating, worthwhile and not intimidating, particularly when partnered with benchmarking. The most positive outcome occurred when they speculated on whether they ought to debrief their own teams after any particularly challenging incidents. Dialogue between hospitals has also improved the debriefing ability of the UK-trained facilitators.

Discussion and Conclusions
Increasingly there is consensus within the literature that high frequency, low intensity simulation sessions are more effective in long-term skill acquisition3; remote simulation may therefore translate to improved performance in the clinical setting. Using internet-based technology to remotely debrief doctors in Nanyuki hospital from a UK hospital through a low-fidelity simulation exercise may be an achievable, feasible and low-cost way to way improve skills and shape professional identity. I am looking to expand this further by facilitating Skype sessions between Nanyuki and senior clinicians in the Kenya’s first Simulation Centre in Kijabe.

References
Use of Digital Stories in Ageing and Health Medical Education Teaching: Nonagenarians tell us about Ageing Well

JA Grey, Centre of Medical Education, School of Biomedical Science, Dentistry and Medicine, Queens University of Belfast, United Kingdom.

Background
In today’s ageing society it is vital to understand better how to ‘age’ well. Where better to start than to ask nonagenarians themselves? Digital storytelling is a powerful teaching and learning tool that can engage students’ visual and auditory senses in ways that the written word alone cannot, and can enhance knowledge retention and shape attitudes [1,2]. Here we asked 90-year-old sibling pairs ‘Why they thought they had lived so long and well’ and prepared digital stories for teaching use within the Ageing and Health (A&H) Module for Medical Students.

Methodology
The study group was a purposeful group of 90+-year-old-sibling-pairs, 5 from each of 4 of the European countries associated with the EU Genetics of Healthy Ageing (GeHA) funded study. Subjects gave written consent for audio-recording and visual images, with Ethical permission by Queens University of Belfast. Using qualitative analysis we identified themes in the nonagenarians’ answers as to why they thought they lived long and well and prepared digital stories with audio and photographic material.

Results
Across 4 European countries, 4 themes emerged: diet, exercise, social networks and mental attitude. Norman from Northern Ireland said “I have always led a quiet life, didn’t smoke or drink and was always fed on good solid food-no junk food”. Meczyslaw from Poland reiterated this saying, “I did not drink too much, I did not smoke”. A happy family life and circle of friends was a prominent feature. Krystyna from Poland said, “The most important thing is that I have a good family. The commonest reason for longevity was a positive attitude, with Krystyna saying, “I knew everything would be fine in the end.”

Discussion
The nonagenarian ‘citizen scientists’ gave remarkable insights into why they had lived so long and well, emphasising diet, exercise, social networks and attitudes. The digital stories provide powerful insights about the nonagenarians’ engagement with ageing-well strategies and align with today’s Public Health messages. The digital stories’ use is being evaluated within the (A&H) module as an adjunct to normal teaching, to assess any change in students’ knowledge and engagement around ageing-well strategies.

1 Sandars J, Murray C. Digital storytelling to facilitate reflective learning in medical students.  Med Educ 2011, 45(6); 649
Student-led Evaluation of Digital Storytelling to Support Experiential Learning

GB Petruso, A Innes, RR Varghese, A Codd, B Burford, GHS Vance, NA Davidson
GB Petruso, Final Year MBBS Student, Newcastle University, Newcastle upon Tyne, NE2 4HH

Background
Direct patient involvement in student teaching is not always possible. A digital story (DigiStory) can harness patients’ unique insight and experience,\(^1\) combining their audio narrative with images to tell the ‘patient story’. Autism is a core condition in the Newcastle University MBBS curriculum, but not all students have face-to-face contact with families living with autistic children. We evaluated online implementation of the ‘living with autism’ DigiStory by considering student views on acceptability and feasibility of use, and examining initial impact of the resource on student attitudes.

Methodology
In this student conceived and led project we developed the DigiStory using themes emerging from an interview with the mother of an autistic child. This was accompanied by hand-drawn images. The DigiStory was incorporated into an online survey that included a validated questionnaire (SATA score\(^2\)), demographics and free text feedback. A focus group further explored student impressions of DigiStory acceptability and suitability for the MBBS curriculum. Quantitative data were compared using paired t-tests (SPSS v22.0). Words used to describe living with autism pre- and post-DigiStory\(^3\) were analysed using Content Analysis. Thematic Analysis of survey text and focus group transcript is ongoing.

Results
In total 61 students completed the survey (64 to the point of post-DigiStory words and SATA score). Most found the DigiStory useful to their learning about the condition (52/62). There was no significant change in mean SATA score (p=0.362, 54.3/64 pre-DigiStory vs 54.0/64 post-DigiStory). Words describing autism pre-DigiStory were predominantly negative (“difficult”, “isolated”) and focused on individual experience, whereas they were more positive post-DigiStory (“normal families”, “celebrate achievements”) and focused on family experience and societal attitudes. Focus group discussion highlighted the rapid “connection” students felt to the mother through the DigiStory and potential transferability to other sensitive curriculum areas, such as mental health (schizophrenia, psychosis). Students felt DigiStories could be used as ‘stand-alone’ online resources or in a seminar setting as discussion prompts.

Discussion
Students found the DigiStory interesting and useful. Changing words used to describe ‘living with autism’ suggests a new awareness of social and family aspects of autism, not developed during the delivered curriculum. The lack of change in SATA score may reflect the high initial scores in our cohort, comparable with autism experts in the validation work. Our findings suggest DigiStories have the potential to capture and convey patient experience in situations where it is difficult for students to access particular conditions.

References
Gamification in medical education: Calculations App for medical students to prepare them for the Prescribing Skills Assessment.

HK Bassi.
HK Bassi Medical Education Pharmacist and Honorary Lecturer (Pharmacology and prescribing)
University of East Anglia Medical School

Background
Medication safety and optimisation are key National Health Service priorities\(^1\). Prescribing is a key area of improvement and drug calculations are a vital skill to prescribe safely. Variable Junior Doctor prescribing skills have been verified both nationally (EQUIP study\(^1\)) and locally (UEA PSA results breakdown – average score 49% for calculations).

Intervention 1.0
To improve learning we utilised Virtual learning environment (blackboard) to deliver calculations support over lectures\(^2\). Although students expressed appreciation for additional input, they found the system difficult to navigate and aesthetically undesirable, thus poor uptake unless we scheduled teaching and were physically available to offer assistance.

Intervention 2.0
In a bid to increase the appeal for drug calculations ‘MathaMedic’ App was created (Apple\&Android devices) Developed with students for students a handy, an online, ergonomic, aesthetically pleasing App was created. Case vignettes written within a game framework prompts students to recall, build on and analyse core mathematical skills to be able to carry out drug calculation correctly and efficiently\(^4\).

Results
Released in October 2015 (no marketing) there were 120 App store views, 93 App units downloaded, of which 89% were in the UK and 11% in the USA.

Discussion
Although in the early stages of data collection and impact measurement; the process of developing an App and introducing gamification in education was challenging, rewarding and incredibly insightful. Having a background in programming and graphic design there was still a lot of learning regarding human behaviour and digital ergonomics; that are core ingredients when technology is used to teach Digital natives\(^5,6\).

Future
MathaMedic Version 2.0 will be launched in 2016 where digital capital will be used to promote progress through the App.

Reference:
2. An in depth investigation into causes of prescribing errors by foundation trainees in relation to their medical education - EQUIP study http://www.gmc-uk.org/about/research/research_commissioned_4.asp
'Technology Contagion!'
The combination of game and technology - does this enhance learning in undergraduate medical education?

Z Hossenbaccus, ZA Dawood, YYS Ho, C Earnshaw, J Hawkins, CD Rodd
Z Hossenbaccus, Redwood Education Centre, Gloucestershire Royal Hospital, GL1 3NN

Background and Purpose
The utilisation of games as a teaching tool is trending and the positive impact of educational games in undergraduate medical education has previously been investigated at Gloucestershire Academy1. Although there are not many studies that outline the effectiveness of games for long term retention of knowledge2, a curriculum design using the idea of gamification is promising3.

Technology enhanced learning in medical education is also gaining popularity among educationalists4. In particular, the use of mobile technology in clinical practice is becoming more widespread with its applicability supplementing several forms of teaching/learning activities5.

This study will combine gamification with technology to investigate the benefits of using a board game in parallel with mobile devices, as an educational tool.

Methodology
A board game has been created as a teaching tool for 3rd year medical students at Gloucestershire Academy (University of Bristol). The game is designed to use near field communication (NFC) tags and mobile devices to teach students on core medical conditions. The game simulates a ‘patient’ presenting to hospital and the game content includes history taking, assimilating signs, investigation, diagnosis, management and future follow up of the ‘patient’. An element of competition has deliberately been incorporated to encourage team work.

A cross over study will be carried out to determine the potential of this game, against traditional teaching methods. A quiz will be used to assess knowledge before and after each intervention to compare their effectiveness with information retention. For each method of teaching, quantitative and qualitative data will be collected using Likert scales and open-ended questionnaire, respectively, to determine the students’ level of enjoyment, understanding and confidence of the topics taught.

Results
Analysis of pre and post intervention assessments along with students’ perceptions of the game will be presented.

Discussion and Conclusions
There are many challenges when delivering a teaching session, one being the ability to sustain students’ attention to prevent them from becoming bored or burning out. The results of this study may show that a blend of games and technology with traditional methods of teaching will create an optimal learning environment for students. It is anticipated that the incorporation of core ideas used in gaming, combined with technology, will appeal to all learning styles and therefore, increase engagement in the learning process. With this in mind, there is potential for the game to enhance students’ clinical knowledge and practice earlier than is usually expected in their training, ultimately improving performance in exams and interaction with patients.

Reference
An embedded real-time evaluation of student performance in problem based learning: with an exploration of the potential for an individualised assessment of performance

CJ Greengrass
CJ Greengrass, Medical Education Department, College of Medicine, PO Box 2114, University of Dammam, Dammam 31451, Kingdom of Saudi Arabia.

Introduction
Assessment of the learning process, rather than merely its outcomes, is important in providing an accurate evaluation of student capability. The environment in which problem based learning (PBL) exercises are carried out is ideal for such assessment. The instrument developed in this study allowed for an individualisation of assessment, whereby group members are evaluated based upon their individual performance proclivities contributing favourably to group productivity and collaborative learning.

Methods
The embedded assessment instrument described, allows continuous scoring of performance throughout PBL sessions. It permits tracking of several aspects of group dynamics within PBL sessions and provides for the assessment of important performance attributes of group members.

Results
Data obtained from this study provides interesting findings on how groups function in PBL with individuals adhering strongly to their characteristic performance attributes over time and not altering their behaviours.

Conclusions
This assessment instrument permitted a form of individualised assessment. Where assessment forms usually consist of a set of criteria for which all participants must adhere to and perform well; participants in a collaborative thinking process contribute very much as individuals, not only providing individual knowledge, which is assimilated by the group (allowing elaboration) but also providing differing behaviours which may contribute to the group thinking process and group functioning.

Take-home message
This novel form of assessment, allowing for those individual differences in behaviours of participants which contribute positively to the performance of the group, is unlikely to affect group dynamics as other PBL focussed assessment tools. This instrument should be considered for use in assessment of PBL and other “group thinking” based activities.
An Evaluation of Medical Students’ Responses to Structured Exam Feedback from Formative Assessment

T Bird, M Hamilton
T Bird, Educational Designer, and Mark Hamilton, Lecturer in Medical Education, Leicester Medical School, Leicester LE19HN

Background
Feedback is perhaps the single highest-impact factor in learning. (1) Undergraduate medical students are often examined in single best answer (SBA) and short answer tests. But the end-of-term summative exam is too late for struggling students to discover their understanding is lacking. Formative exams with descriptive feedback, explaining the error and how to study to improve, should help. This was the rationale behind Leicester Medical School’s decision to implement “little and often” structured e-assessments administered via iPads. In addition, it was hoped that detailed feedback would assist students in all cognitive domains as listed in Bloom’s Taxonomy, and not only knowledge recall. (2) This study examines students’ responses to feedback given via the ExamSoft system in the 2015 Gastrointestinal Unit.

Methodology
Year 2 students in the GI unit (N=237) were given regular structured formative SBA ExamSoft exams during classes, which they did on iPads, receiving immediate, detailed feedback. Additional optional exams were given for study outside of class. A mixed methods approach of concurrent nested design was chosen to examine how students interacted with feedback. First, quantitative data was gathered from the ExamSoft database, to discover what percentage of students engaged with exams, how often, and whether they repeated exams. Second, qualitative data was acquired through focus group discussions, and coded and analysed to discover how feedback was used and whether student learned in domains of the higher elements of Bloom’s Taxonomy. Third, integrated qualitative and quantitative data analysis was done.

Results
An average of 87% of students did weekly formative exams during classes, and an average of 35% did extra exams outside class. Of these 35%, 17% downloaded exams more than once, for repeated study. Focus group data indicates students found formative feedback helpful, enabling them to compare, contrast, rank, differentiate, and categorise concepts -- activities correlating to the three higher cognitive domains of Bloom’s Taxonomy.

Conclusions
Descriptive feedback from regular structured formative exams should benefit students by giving them opportunity to attain learning within the highest levels of cognitive domains described in Bloom’s Taxonomy. Further research could include feedback on short answer question formative exams.

References
Background and Purpose
In 2009 the GMC recommended that all medical students should maintain a portfolio of evidence of clinical competence and reflective practice. It was evident that Final Year student engagement was poor when e-portfolios were first introduced despite being a condition of graduation. A Final Year student survey revealed that e-portfolios were extremely unpopular. Whilst many acknowledged the benefits of having a portfolio the vast majority of students felt that it was another obstacle to graduation and a “tick box” exercise. Given the importance of maintaining a portfolio throughout their careers and the substantial academic staff commitment we reviewed our approach to e-portfolios in order to improve student engagement.

Methodology
A student survey cited a lack of information and guidance as their main concerns. To address these issues we timetabled lectures at the beginning of the Final Year in which the focus was the benefits and merits of engaging with an e-portfolio rather than completing forms. However good clear guidance of the expectations and evidence required was also given. We developed a website which contained not only information on e-portfolio but also extensive FAQs, a multi-media revision section and extracts from previous Final Year e-portfolios. We monitored the completion rates of all Final Year students and referred those not engaging to a pastoral tutor for additional support. Similarly we offered early review to those students who had completed their portfolios before the deadline. We also introduced competencies for all other years of our BM programmes. They have been structured to give students the opportunity to practise maintaining an e-portfolio. These competencies are summative and form part of the student’s yearly appraisal.

Results
Student engagement has been significant higher than in previous years \( (p=0.004) \). e-portfolios are being completed in line with expectations set out at the beginning of the academic year. Early review has proved popular with students and has been heavily oversubscribed.

Discussion
Final Year students are engaging more readily with their e-portfolios and have accepted their role in their undergraduate training. Completion rates have substantially increased compared to previous years. Whilst it is difficult to quantify the content and quality of e-portfolios it appears to have improved and this is probably due to a consistent methodical approach by the students rather than a hastily prepared last minute upload. Highlighting the benefits and providing clear guidance and support has led more students to embracing the concept of e-portfolios.
Examining OSCEs: a metanarrative synthesis

H Reid, M Corrigan, P McKeown, T Dornan
H Reid, Doctoral Research Student, Centre for Medical Education, Queen’s University, Whitla Medical Building, 97 Lisburn Road, Belfast. BT9 7BL

Background and Purpose

Objective Structured Clinical Examinations (OSCEs) are ubiquitous in health professions education (HPE). Early on, assessment researchers focused predominantly on reliability. More recently they have asked broader questions about its validity, opening up the possibility that this form of standardised assessment may have unintended consequences. The UK General Medical Council’s active pursuit of a National Licensing Examination, possibly using OSCEs, makes it important to explore strengths and weaknesses of this format. We report, here, a methodologically innovative research programme, which seeks to make sense of the rise to dominance of the OSCE, and tensions that have resulted. It will allow lessons from the past to inform the assessments of the future.

Methodology

We are using a relatively new approach - metanarrative synthesis (MNS) – following methodological guidance developed by the RAMSES group\(^1\). This secondary research methodology will allow us to identify different conceptualisations of the OSCE, explore within them, and identify tensions between them. We will scope, search and synthesise the OSCE literature in a non-linear manner, actively seeking peer contributions and critiques. Our study design achieves this by supplementing secondary research with primary research, gathered by conducting individual semi-structured interviews with stakeholders and experts. We will purposively sample from other centres (inter)nationally as well as our own. We will analyse interview data using ‘mesolinguistic’ discourse techniques.

Results

Our literature review to date has identified several different metanarratives (roughly equating to research traditions or discourses) around the OSCE. These include psychometric, performativity, patient safety, and production/economic metanarratives. Ongoing work will search iteratively within these metanarratives, synthesise them, and expose contradictions. We aim to gather interview data before ASME’s ASM, to provide proof-of-concept of our methodological approach and illustrate it with specific examples.

Discussion and Conclusions

Whilst this ambitious research programme is in its early stages, we have invested great effort in developing a blend of primary and secondary research approaches. This allows us to present MNS as a means of using evidence synthesis to influence (inter)national assessment policy and practice.

References

OSCEs and the Fate of our Times. A critical review of published articles.

S Duggan, H Reid, T Dornan
S Duggan, Medical Student, Centre for Medical Education, Queen’s University, Whitla Medical Building, 97 Lisburn Road, Belfast. BT9 7BL

Background and Purpose
Objective structured clinical examinations (OSCEs) are such a popular way of assessing the competence of doctors(-to-be) that debate focusses on how rather than whether to use them. Frank¹, however, wrote that dominant ways of thinking are ‘the fate of our times’, not timeless absolutes. We reasoned, like Hodges in an earlier seminal publication², that we could learn about our Times by answering the question: How is the dominant position of the OSCE being challenged? Our purpose was to inform debates about the validity of OSCEs. Our approach was a rigorous review of critical articles.

Methods
The conceptual orientation was towards Critical Theory using a scoping approach,³ which has 5 steps. Step 1 was to frame the review question. Step 2 was to search Pubmed, Scopus, and Web of Science for articles published from 1975 to November 2015. Step 3 was to reduce over 12,000 ‘hits’ to 58 relevant articles by reviewing titles and abstracts, then full texts of seemingly relevant articles. Step 4 was to incorporate metadata and a brief précis of main arguments from each article into a spreadsheet. Step 5 was to identify emergent themes.

Results
Methodological criticisms - psychometric concerns about reliability/validity, and the performance of different types of checklist - tacitly accepted the importance of measuring competence reliably. Deeper-seated concerns were about validity threats: collusion between students and examiners, and rater bias affecting students from minority ethnic groups. Criticisms pitted the psychometric benefits of OSCEs against their cost. The deepest-seated critical arguments went to the core of the OSCE genre. Students who are actors perform better than non-actors, which reinforces Hodges’ earlier concern that OSCEs reward performance, whose relevance to being a good doctor is doubtful. OSCEs were stressful, which militated against reticent students, who might nevertheless be good doctors. And concerns were expressed about the validity of fragmenting workplace performance into its component competences.

Conclusions
OSCEs are criticised for their inauthenticity, ecological invalidity, hierarchical separation of teachers and learners, fragmentation of clinical skill, and ethnic bias. Reliable assessment of clearly defined, reproducible components of clinical competence appears so highly valued that removal of assessment from clinical contexts, at high cost, and at the risk of encouraging theatrical performance is justified. That, we suggest, is the Fate of our Times.

1) Frank AW. From sick roles to practices of health and illness. Med Educ 2013; 47: 18-25
Assessment at UK medical schools varies substantially in volume, type and intensity and correlates with postgraduate attainment

OP Devine, AC Harborne, IC McManus
AC Harborne, Hull Royal Infirmary, Anlaby Rd, Kingston upon Hull, HU3 2JZ, UK

Background and Purpose
In the United Kingdom (UK), medical schools are free to develop local systems and policies that govern student assessment and progression. Successful completion of an undergraduate medical degree results in the automatic award of a provisional licence to practice medicine by the General Medical Council (GMC). Such a licensing process relies heavily on the assumption that individual schools develop similarly rigorous assessment policies. Little work has evaluated variability of undergraduate medical assessment between medical schools. That absence is important in the light of the GMC’s recent announcement of the introduction of the UKMLA (UK Medical Licensing Assessment) for all doctors who wish to practise in the UK. The present study aimed to quantify and compare the volume, type and intensity of summative assessment across medicine (A100) courses in the United Kingdom, and to assess whether intensity of assessment correlates with the postgraduate attainment of doctors from these schools.

Methodology
Locally knowledgeable students in each school were approached to take part in guided-questionnaire interviews via telephone or Skype™. Their understanding of assessment at their medical school was probed, and later validated with the assessment department of the respective medical school. We gathered data for 25 of 27 A100 programmes in the UK and compared volume, type and intensity of assessment between schools. We then correlated these data with the mean first-attempt score of graduates sitting MRCGP and MRCP(UK), as well as with UKFPO selection measures.

Results
The median written assessment volume across all schools was 2000 min (mean = 2027, SD = 586, LQ = 1500, UQ = 2500, range = 1000–3200) and 1400 marks (mean = 1555, SD = 463, LQ = 1200, UQ = 1800, range = 1100–2800). The median practical assessment volume was 400 min (mean = 472, SD = 207, LQ = 400, UQ = 600, range = 200–1000). The median intensity (minutes per mark ratio) of summative written assessment was 1.24 min per mark (mean = 1.28, SD = 0.30, LQ = 1.11, UQ = 1.37, range = 0.85–2.08). An exploratory analysis suggested a significant correlation of total assessment time with mean first-attempt score on both the knowledge and the clinical assessments of MRCGP and of MRCP(UK).

Discussion and Conclusions
There are substantial differences in the volume, format and intensity of undergraduate assessment between UK medical schools. These findings suggest a potential for differences in the reliability of detecting poorly performing students, or differences in identifying and stratifying academically equivalent students for ranking in the Foundation Programme Application System (FPAS). Furthermore, these differences appear to directly correlate with performance in postgraduate examinations. Taken together, our findings highlight highly variable local assessment procedures that warrant further investigation to establish their potential impact on students.
“Social Snakes and Ladders: The NHS Hospital Patient Flow Game”
A novel board game to educate undergraduate medical students on barriers to patient flow within hospitals.

J Hawkins, Z Hossenbaccus, C Earnshaw, YYS Ho, CD Rodd
J Hawkins, Clinical Teaching Fellow, Gloucestershire Academy, Gloucestershire Royal Hospital, Great Western Road, Gloucester, GL1 3NN

Background and Purpose
Bottlenecks and flow of patients through secondary care is increasingly important.¹ Our NHS Trust is currently developing resources to educate staff on patient flow and barriers to good flow. Junior doctors influence key barriers to patient flow including admission, infection, prescriptions and discharges. However, we found 86% (12 of 14) of our medical students agreed/strongly agreed that they had not been taught enough about barriers to patient flow. Since patient flow mimics the disruptive flow seen in snakes and ladders board games and gameplay promotes active learning and higher thinking²; we designed a novel and fun educational game for our students based on this theme. We studied the intervention to explore whether students enjoyment, confidence and knowledge increased playing the novel board game compared to seminar-based teaching.

Methodology
A study was conducted, as a crossover design, involving 19 third year medical students from Gloucestershire Academy. Group A received a 20 minute PowerPoint presentation while Group B played the “Social Snakes and Ladders” board game for 20 minutes. Once finished, the groups crossed over to receive the other teaching method but with modified content. All students were invited to complete pre and post session 7-point Likert scale and open text evaluation forms. They also completed pre and post knowledge tests. A second study was later conducted on fifth year medical students to investigate the role of the game as consolidation to standard teaching, in response to the pilot study feedback.

Results
Data from the pilot study showed the game increased interaction and enjoyment (2.1 score increase, p<0.005). The students found it beneficial and enjoyed the competitive spirit. The game improved confidence (1.64 score increase, p=0.005) regarding patient flow but the seminar still held value for knowledge gain (54% vs. 39.5%). The game was described as ‘engaging, interactive, reinforcing’ with suggestions it be ‘used to consolidate learning’ and may be helpful ‘further down the line’. Results of the second study on the games use as a consolidation method will be analysed and available for presentation.

Discussion and Conclusions
Ensuring smooth flow in secondary care is increasingly important for patient care but it is a dry subject to learn. ‘Gamefication’ of this subject in the form of snakes and ladders has proved enjoyable, beneficial and helped improve confidence. We anticipate the success of this game as a post-seminar consolidation tool.

References
A Model for Medical Application Courses: Widening Access to Student Preparation

C Ratneswaran, J Mushtaq, C Reshekaron, J Steier
C Reshekaron, Queen Mary University of London, E1 4NS

Background and Purpose
There is a growing trend of private entities offering premedical school application courses financially out of reach to poorer socioeconomic groups. This hinders access to global learning and leads to a successful medical school application skew towards the richer and better trained, as opposed to the better suited\(^1\). To address this, students from three universities co-ordinated a pilot philanthropic medical school application conference, featuring an outreach programme to less affluent communities.

Methodology
The conference was based on a peer assisted learning (PAL) teaching method\(^2\) and so incentivised speakers by developing organisational, communicational, teaching and presentation skills, avoiding a financial motivation. The itinerary included: life as a doctor and medical student, the medical application process, medical communication skill, ethical and also personal statement writing workshops. A social media feed encouraged collaborative learning and networking, and a website was created providing a social hub for students, as well as endorsing affiliated charities. Formal feedback was elicited from both tutors and attendees using an electronic survey.

Results
On a scale of poor, indifferent, good and excellent: 87.5% of attendees (n=50) rated the course as excellent and 12.5% rated it as good. White space comments trended thanks towards students for giving up their time, increased understanding of the roles and responsibilities of doctors, appreciation on personal statement feedback and calls to push similar sessions into their owns schools. Tutors (n=8), on a scale of 1 (poor) to 5 (excellent), reported significant improvements in teaching confidence (2.8 to 4.4, p<0.01) and public speaking (3.2 to 4.3, p<0.05); 100% rated overall enjoyment of the course as excellent. In addition, two British Lung Foundation Research travel awards have been established for the European Respiratory Society and the American Thoracic Society conferences.

Discussion & Conclusion
Our results demonstrate that a collaborative teaching conference model incorporating medical student PAL tutors provides significant benefits to pre-medical students and also medical student tutors. Encouraging courses with this philanthropic model allows for a lost cost, high quality session that may help reduce an unfavourable trend that negates lower socioeconomic persons from successful medical applications.

References
A student-centred approach to histopathology teaching: a mock breast multidisciplinary meeting

R Holman, F Bold, K Billingham, F Maggiani
R Holman, Clinical Teaching Fellow, Swindon Academy, Great Western Hospital, Marlborough road, Swindon, SN3 6BB

Background and Purpose
Medicine is becoming an increasingly specialised field with an emphasis placed on interdisciplinary collaborative working.\(^1,2\) This presents a challenge in medical education, particularly in broad disciplines such as pathology. A good understanding of pathology is essential for doctors in the clinical setting, with it being central to a variety of different specialities.\(^1\) Multi-disciplinary meetings (MDMs) provide an opportunity for students to learn whilst observing interdisciplinary working, however often they are above the level of the students and due to the clinical workload, there is often little time for teaching and discussion. MDMs at Great Western hospital have been poorly attended by pathology students and as a result a student-centred ‘mock’ breast MDM was designed and delivered for the pathology students. This paper aims to evaluate this novel approach as a method of teaching and involving medical undergraduates doing Pathology.

Methodology
The mock breast MDM was delivered at Great Western Hospital, Swindon, as part of the University of Bristol third year undergraduate Pathology, Psychiatry and Ethics module. It was delivered four times during the year and was attended by a consultant histopathologist, radiology registrar and clinical teaching fellows as well as the students. Ten real cases of previous or current patients were used. The cases were varied and were selected to map on to the breast pathology curriculum.

Anonymous feedback questionnaires were given to the students directly after the mock MDM using a 5 point Likert scale to rate different aspects of the teaching and questions to gain qualitative data, followed by a focus group overseen by clinical teaching fellows, where students could discuss and feedback freely about the MDM. A pre and post session knowledge quiz was also used to evaluate the effectiveness of this as a teaching method. The first block of four students had had the MDM prior to the development of the questionnaire, however were contacted and asked to feedback retrospectively.

Results
The feedback questionnaire and knowledge test data (n=16) will be analysed and a paired T test applied. Thematic analysis will be performed of qualitative data from the focus groups.

Conclusion
Conclusions will be drawn based on the results as to whether this novel approach to pathology teaching is a valuable learning experience for the students. We hope that this style of teaching will encourage students to attend and partake in pathology teaching in the multidisciplinary setting.

References
A study investigating the effect of dialogic feedback and self-regulation on surgical task performance, skill retention and learner experience of feedback

SL Gill, F Harrold, S McAleer, R Ajjawi
SL Gill, Medical Education Directorate, University of Dundee, Ninewells Hospital and Medical School, Dundee, DD1 9SY, UK.

Background and Purpose:
Feedback and its importance to surgical training is well established. Recent research proposes development beyond tutor-learner information transfer to the creation of exploratory tutor-learner dialogue. Theory suggests that strategic engagement of the learner during task completion, the process of self-regulation, is linked with improved task performance. This study was undertaken as an MD project investigating the effect of an integrated model of dialogic feedback with self-regulation promotion on surgical skill development and retention.

Methodology:
This mixed methods study aimed to explore the quantitative effect of feedback model on surgical skill development and learner experience and ideas surrounding feedback.

A numbers needed calculation (power 80%; p<0.05) was performed using previously presented pilot study data. 60 medical students were randomised between Groups A (information transmission) and B (dialogic feedback). Participants completed three study visits one week apart and final fourth study visit at week seven. Each study visit involved task practice and repeated performances (P1-7) of a simulated laparoscopic task (LapSim®; vessel ligation). Visit four also included completion of a cross-over task (vessel division), in which the participants received no tuition beyond standardised instruction. Quantitative outcome performance measures were: time to task completion, economy of movement via combined instrument path length (CIPL in metres), accuracy of clipping, frequency of vessel rupture and blood loss. Tutor-participant feedback followed each task performance. Technical content and total feedback time was standardised between groups.

Qualitative data was collected in visit three and four. In visit three participants completed a 'strategic mindfulness interview' to explore the intra-task thought process. In week seven a semi-structured interview exploring participant ideas in relation to feedback purpose, roles and efficacy was conducted.

Results and discussion:
Data collection is complete and full data analysis is ongoing. At time of presentation, the results will be available for presentation and discussion.

References
An evaluation of the effectiveness of BM6 Year 0 in preparing students for Year 1

Leggett B, Curtis S.
Leggett B, Medical student, MEDU, Faculty of Medicine, Highfield Campus, University of Southampton, Southampton SO17 1BJ

Background and Purpose
The Medical School Council’s ‘Selecting for Excellence Group’ recently made recommendations that all medical schools should support widening access students in fulfilling their maximum potential, aiding retention and progression through the provision of appropriate support. The University of Southampton offers a 6 year widening access to medicine programme (BM6). It is comparable to traditional medicine degrees with an additional Year 0 (Y0) at the start of the programme. Y0 aims to help students from low socio-economic backgrounds prepare academically, socially and professionally to enter Year 1 (Y1) and successfully complete their medical degree.

The BM6 programme requires transition from a supportive and specifically designed learning environment with 30 students in Y0, to a class of 240 students from a variety of different backgrounds, with a far greater student to staff ratio. Educational transitions are known to be challenging, and recent research has shown that the transition from Y0 to Y1 is particularly difficult. First generation students entering higher education have been found to have unmet expectations of higher education in terms of integration, workload, lifestyle and support from their institutions. This can pose difficulties for students in terms of satisfaction, retention and progression.

This research project aims to identify areas where students feel more support could be provided to facilitate the transition, and to identify areas of best practice in Y0.

Methods
Year 1 and 2 students’ experiences of the transition from Y0 to Y1 will be explored through focus group meetings after their January exams. Year 2 students will also be invited to provide a retrospective perspective of their experience of Y1 as a whole allowing for comparison between students at different points in their training. Data collected will be transcribed and analysed using inductive thematic analysis to identify major categories from which and key themes will be explored.

Results
Students’ initial expectations of starting Y1 and whether or not those expectations were met will be explored. Overall perceptions and experiences of the transition from Y0 to Y1 will also be investigated, with reference particularly to what was helpful, what was unhelpful and any additional support would have aided the transition.

Discussion
Supporting students from low socio-economic backgrounds studying medicine is an important step in diversifying the profession. This research aims to find out how to maximise the support to optimise retention and progression in widening access students.

2.Medical Schools Council, Selecting for Excellence Final Report, 2014
An investigation into the value of PeerWise as an educational and development tool for medical students

E Fagan, C Guilding, M Atkinson, J Stewart
E Fagan, School of Medical Education, Newcastle University, Newcastle Upon Tyne, UK

Background
PeerWise is a free online quizzing platform that allows students to author and answer multiple choice questions (MCQs), rate the quality of other students’ contributions and discuss content. It provides an opportunity for self- and peer-assessment and incorporates aspects of active learning. Research indicates that PeerWise may improve academic performance but there is little research into the benefits for medical students\textsuperscript{1-4}. PeerWise was introduced to MBBS students at Newcastle University in the first semester of the 2014/2015 academic year and was highly utilised. End of year feedback suggests that some students believe the use of PeerWise has impacted upon their academic performance. However this, and any other learning benefits of PeerWise use, remain to be explored.

Aims
The aim of this study is to gain insight into the value of PeerWise as an educational and development tool. We have 3 specific research questions:

i. Does PeerWise positively enhance the academic performance of Stage 4 MBBS students?
ii. What specific aspects of PeerWise (e.g. authoring, answering questions, commenting) most impacts academic performance?
iii. Which elements of PeerWise do students feel most contribute to their learning?

Methodology
A mixed methods approach will be taken. PeerWise records a vast array of data such as the number of questions authored, the number of questions answered and the proportion of questions answered correctly. Data automatically generated by the PeerWise website, along with academic performance data from the Stage 4 exam will be analysed to yield insights into any correlation between PeerWise use and academic performance. An online questionnaire will be used to investigate diversity of viewpoint on the potential benefits of PeerWise. The results of this questionnaire will inform the questions for the focus group. The focus group aims to capture information on the perceived value of PeerWise and the barriers and facilitators to engagement with educational tools. Data will be transcribed and a content analysis will be undertaken.

Output
Quantitative data capture is complete and qualitative data generation and analysis will be complete by June 2016. We will present these results at the meeting. The data pertaining to engagement from this study should allow us to gain a better understanding of the barriers and facilitators of engagement with education tools by undergraduate students. This knowledge will be applicable to a range of educational tools (including online tools) used both within medical education and in the Higher Education learning sector in general.

References:
The bimanual vaginal examination (BVE) is one of the most intimate examinations doctors can perform. Additionally, the examination is difficult to learn, both because finger movements are internal (thus making it a blind procedure), and because methods between practitioners are highly inconsistent. This creates difficulty both for the student and the teacher. Our study aimed to produce a cognitive task analysis that decodes expert knowledge to form a detailed and standardised list of procedural steps, and sought to assess its usefulness as a procedural examination checklist in undergraduate teaching.

We designed a prototype pelvic model with a semi-transparent vaginal cavity and internal video recording hardware. Video and audio data of ten experts performing BVE was collected, analysed and validated to produce the cognitive task analysis and standardised procedural examination checklist. This was then used as the basis of a teaching tool for undergraduate small-group teaching for students who had no previous experience in obstetrics and gynaecology. At a later date, student performance was assessed and compared to students who had undergone traditional undergraduate training.

BVE was deconstructed into 30 procedural steps, 5 of which were additional steps if pathology was suspected. There was no significant difference overall in examination performance between students who had only been taught using the cognitive task analysis, and students who had only had traditional teaching during rotations (p=0.387). Students taught with the task analysis performed significantly better in two of the individual steps (p=0.038 for both).

This study successfully created an innovative pelvic model and a standardised procedural checklist for BVE, rendering tacit expert knowledge explicit, and serving as an aid for teaching, assessment, and development of simulation interfaces. Furthermore, we demonstrated that the use of the resulting cognitive task analysis was equal, and possibly superior, to conventional teaching methods for medical undergraduates.
Calling for help in clinical simulations: An examination of the latency and decision making processes of medical students

E Shapiro, B Burford, G Vance
E Shapiro, School of Medical Education, The medical School, Newcastle University

Background and Purpose
Knowing when to appropriately call for a senior’s help is a key skill for junior doctors. Judging a deteriorating patient’s condition against their own competence is a complex task\(^1\). Barriers to asking for help include issues of confidence, fear of appearing to lack knowledge, and worry over the subsequent interaction with the senior doctor\(^1-4\). However, there has been little literature looking at how this skill is learned. Simulation provides an opportunity for medical students to practice calling for help, and so allows their reasoning to be considered.

This study had two aims:
1. Identify how the time taken to call for help varies
2. To understand what influenced individual students’ decisions.

Understanding how and why this time varies, and the influences on its variability, may help to improve teaching such that new doctors are better able to call for help at the optimal time thus contributing to patient safety.

Methodology
Video recordings of 86 simulation sessions undertaken by final year medical students were reviewed to identify how long students took to call for help. Sessions involved students conducting an Airway-Breathing-Circulation-Disability-Exposure (ABCDE) assessment of a patient (SimMan) presenting with one of a number of acutely deteriorating conditions. Sessions were divided into three blocks containing three clinical scenarios. Data were analysed to identify any systematic variation with time or scenario.

Results
Analysis of variance found only a significant effect of Scenario (nested within Block). Follow-up pairwise comparisons found that within the first block, participants in a GI bleed scenario took significantly less time to call for help than others (mean 320.6s, sd=161.7s).

Discussion and conclusions
Preliminary results show that the time to call for help was influenced by the clinical scenario. Treating a patient with a GI bleed was found to spur the medical student to seeking senior assistance the quickest. This scenario differed from others in that students faced a physical symptom of the patient’s condition (e.g. bloody vomit). The time to call for help has been found to be sensitive to the clinical situation medical students are experiencing\(^2,3\).

However, the artificiality of the simulation session, and awareness that they were expected to call for help by the end of the scenario, may limit transferability to practice. Understanding the limits of this learning could improve the education of new medical students, which would lead to smoother transitions into postgraduate clinical training.

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Can simulated surgeries facilitate diagnostic reasoning in undergraduate medicine?

A Nagy, W Scott-Smith, G Ferns
A Nagy, Brighton and Sussex Medical School, Brighton BN1 9PH

Background
In September 2015, the Institute of Medicine launched a report claiming that there is an urgent need for research on the diagnostic process in healthcare\(^1\). The committee recognizes the importance of clinical reasoning skills and calls for better education and training in all aspects of clinical reasoning\(^1\). At Brighton and Sussex Medical School, 4th Year medical students are exposed to consultations in General Practice through the use of simulated surgeries. This provides them with opportunities for practicing diagnostic skills in a risk-free environment with simulated patients. However, few studies have explored the link between simulated practice and diagnostic reasoning.

Methodology
Our qualitative study has three parts. The first part explores how 4\(^{th}\) year medical students think during diagnostic consultations. Volunteer participants are filmed as they carry out diagnostic consultations in a simulated surgery setting, followed by video-stimulated reflexive interviews, where students are asked to reflect upon their diagnostic reasoning. Thematic analysis is used to identify common themes. The pilot scheme was completed in 2015, and the main study will commence in March 2016. In the second part, 5th year students will be filmed during diagnostic consultations during their general practice placements, followed by thematic analysis of reflexive interviews. The final part will involve filming junior doctors during diagnostic consultations, analysed using the same protocol. Data collected through these three stages will help explain the cognitive developmental changes related to diagnostic reasoning skills and identify how various educational methods can facilitate cognitive development.

Results
In the pilot study, two 4\(^{th}\) year medical students were filmed during six simulated consultation stations per student, with thematic analysis of two reflexive interviews each. Preliminary analysis suggests mixed evidence for the use of pattern recognition, accompanied by comments about lack of knowledge in certain domains, including management. A reductionist approach to history taking was apparent, which may be aided by the context of the simulated surgery. Finally, there has been some indication for premature diagnostic closure.

Discussion and Conclusions
Our findings are consistent with the existing literature on the common cognitive causes for diagnostic error, including inadequate knowledge, faulty data gathering and faulty data synthesis\(^2,3\). It will be further explored how these may change as medical students approach qualification. Our findings also suggest that there is room for improvement in the current design of the simulated surgeries to better suit the facilitation of diagnostic reasoning skills.

References
Concepts maps are useful tools for representing clinical reasoning among third-year medical students

DFM de Oliveira, RS Pessoa, LL de Medeiros, APRM Falcão, MJP Vilar, RVZ Diniz

DFM de Oliveira, medical student at Queen Mary University of London, Philpot Street 60, Floyer House, Room T324, London E1 2DP

Background and Purpose
Concept maps are innovative methodological tools developed by Joseph Novak based on the Theory of Meaningful Learning; they are designed for representing knowledge by establishing links between concepts\(^1\). Because they can represent theoretical content in an integrative and associative fashion, concept maps are a promising tool for teaching and learning clinical reasoning in medical schools\(^2\). This study aims to compare concept maps with open-ended questions in order to represent clinical reasoning among third-year medical students.

Methodology
Forty-seven third-year medical students from the Northeast of Brazil went through an intervention designed to evaluate concept maps regarding the teaching of Liver Failure. After answering a series of multiple-choice questions about Liver Failure (Pre-Intervention Test), students were divided into two groups. The first group (GI) was trained in using concept maps, and then resolved a clinical case using this tool. The second group (GII) resolved the same clinical case using open-ended answers. Then, after both groups were trained in using concept maps, they attended a class on Liver Failure and resolved a second clinical case using concept maps. Finally, all students answered the same initial set of multiple-choice questions on Liver Failure (Post-Intervention Test).

Results
Eleven students had already used concept maps previously, but only three of them used them during medical school. The average academic score was equal between both groups, and therefore there was homogeneity at randomization. A statistically significant association was found between students who used concept maps in terms of answering the clinical case in a completely adequate manner, when compared to students who did not use this method (\(p = 0.011\)). Only two students (16.7\%) answered completely the main question (considering the gold-standard), both from GI. Partially complete answers corresponded to 83.3\% of students on GI and 72.7\% of students on GII. A statistically significant association (\(p = 0.029\)) was found between the use of concept maps and the achievement of a better answer for the clinical case. P value was determined using Pearson’s Chi-square Test for Independence.

Discussion and Conclusions
Previous studies show that concept maps can uncover students’ knowledge structures\(^3\) and integrate knowledge\(^4\), but few studies address whether they enhance clinical reasoning among medical students\(^5\). This study shows that clinical reasoning can be further developed if concept maps are used instead of open-ended questions among third-year medical students. Therefore, they can be useful tools for discussing clinical cases and teaching syndromic diagnostics.

References
Background and purpose
Research indicates, that in terms of widening access and improving social mobility, ‘medicine lags behind other professions both in the focus and in the priority it accords to these issues’.

Reports illustrate that medical school admissions within the UK are dominated by those from higher socio-economic backgrounds, and acceptance rates in lower social classes are decreasing even further.

In response to this, the Selecting for Excellence Report (November 2014) recommended that the use of contextualised data in admissions should be explored and research commissioned to examine the impact of different weightings of admissions procedures on selection values and widening access. This project explores the relationship between applicant socio-demographic background and performance at each stage of the selection process, and determines whether any stage of the Liverpool admissions process is inhibitory to widening participation (WP) individuals.

Methodology
The study sample consists of Home/EU applicants to the programme who applied in the 2013/14 and 2014/15 admissions cycles, equating to 5439 applicants. Applicants’ personal data has been collated, accompanied with geodemographic segmentation data from ACORN, POLAR 3, and the Index of Multiple Deprivation (IMD). The WP cohort has been identified using ACORN and POLAR 3 data, school’s performance level over a 3 year period, time in care, and non-traditional routes in education.

Results
Analysis of the socio-demographics of applicants to the programme illustrates a similarity to national statistics. Most applicants progress directly from school and are female, and this is reflected in acceptance to the programme. No discrimination was found in selection in relation to age, gender, disability or ethnicity but parental experience of higher education is a significant advantage. IMD data depicts that applicants from the most deprived areas may be disadvantaged in gaining a place. 15.67% of WP applicants were offered a place on the programme; a similar proportion to the 18.93% of offers made to the whole applicant pool. However, data suggests WP applicants face a disadvantage in achieving the required academic criteria, but progression through the non-academic stages of the process were not impeded. While issues with underrepresentation of the WP cohort need to be addressed by engaging a wider pool of applicants, our data indicates that lowering the GCSE requirements for this cohort may increase the number of students from disadvantaged backgrounds on our medicine programme.

References
Defining Fidelity in Clinical Simulation: Refining a learner-centred framework

N Mordi, B Burford, R Thompson, G Vance
N Mordi, Teaching and Research Fellow, Wansbeck General Hospital, Ashington, NE63 9JJ

Background
Clinical simulation has increasing presence in undergraduate and postgraduate training medical education due to its ability to afford experiences comparable to the clinical workplace while retaining educational control and protection of students and patients. Much development has been in the area of “high-fidelity” simulation. This ostensibly simple term means that the simulation is close to reality, but there has been little close examination of how that distance is defined, nor its necessity for educational benefit.

This project aims to identify the components of fidelity from the perspective of the learner, that is, what elements of simulated practice are attended to in learners’ construction of ‘reality’. This takes an epistemologically distinct view of the concept, being more explicitly constructivist in contrast to the implicit objectivism of much of the literature. This paper presents this epistemological approach, and a framework of fidelity derived from the literature building on earlier classifications.

Methods
A literature review considered the question ‘What are the definitions of fidelity in simulation used for education and training?’ Systematic searches of relevant databases were carried out to identify studies which defined or described dimensions of fidelity.

Results
An initial 7000 articles have been reduced to 204 for further review. These indicate multiple components of fidelity that have been described which can be broadly categorised into 6 dimensions. Three of these: physical, conceptual, psychological have been included in previous typologies, but the others – which we have termed task, temporal and interactional – have not been included in earlier frameworks.

Discussion
The early stages of the literature review demonstrate that fidelity in simulation is a multidimensional concept – that is, there are multiple elements that may be manipulated to create an illusion of ‘realism’. However, descriptions tend to assume there is one standard reality that we are trying to recreate. If we examine simulation from a constructivist standpoint our understanding of how those dimensions are perceived, and interact to facilitate or hinder learning at different stages of training may be enhanced. We may also find that there are additional dimensions of fidelity that are important to learners. Identifying these components and dimensions would add richness to simulations with a view to better achievement of learning outcomes.

We conclude that theorising about fidelity from a learner-centred perspective will open new routes to the optimisation of clinical simulation as a mode of education.

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DermARTology: Can a dermatology art workshop improve undergraduate recognition of skin lesions?

Tasker F, de Berker D, Narayan S and Morgan J
F Tasker, Clinical Teaching Fellow North Bristol Academy, University of Bristol Medical School, Southmead Hospital, Bristol, BS10 5NB; University Hospitals Bristol

Background and Purpose
Medical students should be able to recognise common benign and malignant skin lesions. However, Aldridge et al., have shown that medical students have poor diagnostic accuracy for recognising skin cancer lesions after their dermatology training and concludes that traditional dermatology teaching is inadequate to meet the current UK guidelines for graduate skin cancer competences. Several studies have demonstrated that after visual training in an art museum, medical students improved their observational skills. Interestingly, a similar study showed that visual art training did not require specially trained personnel or art museum partnership. Our aim was to use visual art training in a classroom setting followed by additional drawing of dermatological lesions in an attempt to improve observational skills and the recognition of benign and malignant lesions.

Methodology
Eight students with no prior training in art attended the workshop. To train students to ‘see’ and improve their observational skills, the first half of the lesson was spent looking at paintings using Visual Thinking Strategies (VTS) questions to guide students. During the second half of the lesson, students drew dermatological lesions with crayons and annotated them. Students completed a quiz on dermatological lesions before and after the session. Photos in the quiz were validated in a previous study.

Results
All students improved their observational skills tested by observing a painting. The mean number of observations before the session was nine, and after visual art training students identified an additional eight observations. The first test scores mean was 6 out of 25 (range 4 to 10) and the post-session mean score was 15 out of 25 (range 11 to 18). Six of the students rated the session 5 out of 5 for enjoyment and two students rated it 4 out of 5. Student feedback included: ‘Art helped to enhance my memory. Describing the lesions helped my memory as well’; ‘Made me more observant. More thorough when looking at a lesion’; ‘I think drawing skin lesions was a really good way of making me stare at lesions and burning them into my memory’; ‘Improved recognition of skin lesions’.

Discussion and Conclusions
A novel art workshop which involved observing art improved medical students observational skills. The addition of drawing, which is a powerful tool for thinking and communicating improved recognition of skin lesions. Art in the medical curriculum is precarious and Friedman argues that humanities should be encouraged so that they can offer different ways for students to analyse information.

References
Developing, implementing and evaluating the effectiveness of an undergraduate Clinical Reasoning Curriculum

S Khin-Htun, R Dennick
S Khin-Htun, Medical Education Fellow, Trent Simulation and Clinical Skills Centre, Queen Medical Campus, University of Nottingham, NG7 2UH

Background
Clinical reasoning (CR) is the essential function of the physician; optimal patient care depends on keen diagnostic acumen and thoughtful analysis of the tradeoffs between the benefits and risks of the tests and treatment.

Although clinical reasoning skills are acquired by the experiential learning of undergraduates as they pass through the clinical curriculum it has not been formally taught as a specific theme within the Undergraduate curriculum leads to a situation where newly qualifying doctors have varying knowledge and experience about clinical cognition and relatively unprepared for how best to manage the risks.

Responding to recommendations on curriculum content from the General Medical Council, the Nottingham University Medical School proposes to introduce a vertically integrated clinical reasoning strand starting in year 1 and working its way through the whole 5 years of the curriculum. That curriculum will be reinforced by the students’ clinical experience throughout their undergraduate period, and which will prepare them more effectively for qualification.

Aims
The aims are to measure the effectiveness of the new Clinical Reasoning curriculum in developing clinical reasoning skills by comparison with students who have not been exposed to the new curriculum with the students who had partial exposure and students who had full exposure and to explore the effects of the integrated curriculum (BMedSci group) and problem based learning curriculum (GEM group) on the development of clinical reasoning.

Experimental protocol and methods
It is measured by clinically orientated summative assessment of third year medical students.

Results
In all three years GEM students scored better than BMedSci students on the CR component of the summative exam.

Discussions
GEM students scored better indicating a possible curriculum difference. The mean differences between their scores varied in each year due to differences in the number of CR questions. Therefore it is not yet possible to ascribe differences in CR scores to the implementation of the CR curriculum. However, the curriculum impact on the level and quality of CR will be monitored again when they enter final year. It will also be measured by a number of formative assessments.

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Development of an online platform to promote undergraduate engagement in academic research projects: Describing the ProjectPal experience

D Gill, A Rossiter, P Sivakumaran, R Lobo, G Mahir, T M Rawson
D Gill, Imperial College London, Hammersmith Hospital Campus, Acton, London, W12 0NN. Email: dipender.gill@imperial.ac.uk

Background
The British Medical Association have set research, teaching and training as a priority for securing the future of the National Health Service (NHS) (1). The General Medical Council advocate that all newly qualified doctors have a grounded understanding of research regardless of whether they intend to pursue an academic career (2). Knowledge of medical research is believed to promote understanding of evidence-based medicine, thus allowing critical analysis and interpretation of the medical literature, guiding everyday practice (2). In the United Kingdom (UK), despite a high proportion of interested students and an abundance of opportunity, students struggle to engage with extra-curricular research, citing time pressures, limited networks, and inadequate supervisor support as reasons (3). To address these challenges, we aimed to create an intervention which would centralise the advertising of academic projects.

Methods
Semi-structured interviews were held with a representative sample of medical students, junior doctors, senior clinicians, biomedical scientists and NHS managers (n=11) to explore the requirements of a website to facilitate student involvement in extra-curricular projects. This was done iteratively to create www.projectpal.org (4), and feedback was used to optimise functionality and the graphical user interface based on our stakeholders’ experiences (5). All interviews were transcribed verbatim and thematically analysed. The website was then piloted for two-years at Imperial College London (UK).

Results
Several key themes emerged during analysis of the interviews. These included that the website must be simple to use, that automated emails would be desirable to communicate with users and that the website should adhere to information and research governance. During iterative development, a minimalist layout to the website was reported as preferable, allowing stakeholders to browse and search through a simplified overview of projects efficiently, whilst keeping further details only one click away. Stakeholders recommended a limit of one automated email per day with an aggregation of notifications, for greater efficiency. For compliance with information and research governance, stakeholders favoured that only those with institutional access were allowed to view or create projects, with no confidential information disclosed on the website. In two years, since its launch, 390 individuals have joined ProjectPal; 64 projects have been advertised on the website, with 68 applications made.

Conclusion
We have developed and piloted an online platform to facilitate undergraduate participation in extra-curricular academic projects. Further longitudinal assessment will allow us to measure the effectiveness and outcomes of this intervention.

References
Do we support students to ask ‘good’ questions in Problem Based Learning?

S Bull, H Lloyd
S Bull, University of Exeter, University of Exeter Medical School, St Luke’s Campus, Heavitree, Exeter, EX1 5DU, United Kingdom

Background and Purpose
It has long been acknowledged that the ability to ask ‘good’ questions promotes ‘good’ learning. Questioning is an integral part of the Problem Based Learning (PBL) and students and facilitators ask questions throughout the entire process. The questions set at the start of the PBL process are particularly important because they inform the student’s independent learning and provide much of the structure to discuss learning when the students come back together as a group. It is therefore important that facilitators are aware of the type and quality of questions that students ask at this stage as greater awareness could help facilitators to support students to develop their questioning skills.

Methodology
An analysis of the questions set by 10 PBL groups (facilitated by 9 tutors) was undertaken. Students were in their first year at medical school and studying a PBL case about hypertension. Questions were classified according to the McMaster questioning level scale by two researchers. This was done independently and then through a consensus process. Further analysis of questions set by students in PBL groups, including whether the questions set were ‘SMART’ (specific, measurable, achievable, relevant and timed) is also being conducted. The data was then used during facilitator training to promote dialogue around a PBL facilitator’s role in supporting students to develop their questioning skills.

Results
Of the 280 questions set by students, 183 were at questioning level 1 on the McMaster scale. These questions require a response of factual information. Sixty seven questions were at level 2 which requires that students analyse and interpret information. Only 30 questions were at level 3 and 4 where the skills of hypothesis, prediction, critical analysis and opinion are involved. Facilitators were surprised at how few questions were being asked at the higher questioning levels and strategies to stimulate better questioning were discussed. Prompting students to develop factual questions so they also ask ‘how does that work’, ‘what would happen if’, and ‘is this the right decision’? were considered useful

Discussion and Conclusions
The analysis of the student’s questions helped facilitators focus on what they could do to help students improve their questioning skills. The methodology we used to analyse the questions could be applied to other contexts and to other education interventions.

References
http://maclife.mcmaster.ca/academicskills/pdf/levels.pdf
Does the Positioning of Medical School Finals affect Preparation for F1?

L R Baxter, S H Manning
L R Baxter, GHNHSFT at Gloucestershire Royal Hospital, Great Western Road, GL1 3NN

Background
Studies have identified ‘world of work’ skills as a relative weakness amongst medical school graduates\(^1\). Foundation trainees and supervisors consistently feel that they have a lack of clinical ward experience on starting F1\(^2\). A report for the GMC suggested sitting finals earlier in the course to allow more time for clinical experience\(^3\) and ‘Shape of Training’ recommends the entirety of final year is devoted to preparation for practice\(^4\). However there have been no studies to determine whether this better prepares students for foundation training.

Aims
To assess whether the positioning of medical school finals affects students’ perceived and observed preparedness for F1 and their performance in ‘world of work’ skills required for F1.

Methodology
The students perceived preparedness is assessed using questionnaires derived from focus groups to establish their validity and piloted on third year students to improve this further. Students’ preparedness is assessed during an observed simulated ‘life on the ward’ session. Students are given tasks to prioritise and complete and throughout the session there are interruptions from other simulated team members as in daily F1 life. The assessment focuses on ‘world of work’ skills (prioritisation, leadership, communication, team work and time management), which are not commonly assessed. The same simulated sessions and questionnaire are given to students from both Bristol and Newcastle cohorts.

Results
The responses to the questionnaires will provide qualitative data about the benefits and less effective areas of assistantships. When comparing students’ pre and post finals we have information on how the position of the exams affects engagement in assistantships and the benefits derived from them. The questionnaires will also indicate how well prepared the students feel for their F1 year and what specific areas of training they are more or less confident in. Quantitative data on the performance of the students in ‘world of work’ skills is provided by the results of the observational assessments conducted during the ward simulation session. The results will be presented in the context of what is already known on this topic.

Discussion
Both universities have similarly structured curriculums, and place emphasis on the same aspects of medical training. The significant variable between the two is, at the time of assessment, students from Bristol will have completed their finals whereas Newcastle students have not. The results will indicate whether this is significant when evaluating the students’ preparedness for their upcoming F1 posts.

References
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Essential Orthopaedic and Plastic Surgery Emergencies Course: the missing piece of the curriculum

K David, N Dutta, R Najim, N Patel, A Sadri
K David, Chelsea and Westminster Hospital, London, UK

Background
There is little emphasis on orthopaedic and plastic surgery teaching in the UK. Medical schools dedicate an average of 2.7 weeks to orthopaedics\(^1\) while students report feeling unprepared for plastic surgery.\(^2\) Junior doctors encounter these specialties regularly: on call, in the emergency room and in general practice. We aimed to fill this curriculum gap by providing a focused interactive course looking at the recognition, assessment and management of orthopaedic and plastic surgery emergencies.

Methodology
The course was targeted at the undergraduate and junior doctor and was delivered by two specialists in the field. Attendees completed pre and post-course multiple choice question tests and 3-point Likert scores assessing confidence.

Results
The over-subscribed course ran for 50 attendees. Analysis with paired t-tests showed a statistically significant difference between pre- (mean=2.54, SD=1.07) and post-course (mean=4.56, SD=0.68) orthopaedic test scores, \(t(95)=11.56, p<.001\). This difference was also present with the plastic surgery pre- (mean=2.85, SD=1.25) and post-course test results (mean=4.80, SD=0.40), \(t(91)=10.65, p<.001\). We demonstrated a statistically significant improvement in confidence in both specialities, with a mean pre-course Likert rating of 1.57 (SD=0.70) in orthopaedics, compared with a post-course mean of 2.86 (SD=0.42), \(t(83)=11.76, p<.001\). Similarly in plastics, a pre-course mean Likert rating rose from 1.42 (SD=0.63) to 2.81 post-course (SD=0.45), \(t(85)=13.17, p<.001\).

Discussion and Conclusions
This course was successful in improving knowledge and augmenting confidence in orthopaedic and plastic surgery emergencies. The low pre-course test scores and confidence ratings are revealing of a curriculum void. Although the data yielded significant results, course timings restricted questions to five per specialty, focusing only on key principles, thus limiting assessment of breadth of knowledge. A follow-up examination of attendees’ knowledge and confidence is planned to assess the lasting clinical value of the course. Overall, we have demonstrated how a timely and apt teaching intervention can make a significant difference to student and junior doctor knowledge and confidence.

References
Evaluating a novel model of feedback provision for medical students: the FEEDBK model

C Hall, S Hogan, M George, S Trinh, R Vithlani, C Morton, A Sam
C Hall, Medical Education Research Unit, Imperial College London, School of Medicine, SW7 2AZ

Background and purpose
The purpose of feedback is to improve the learner’s knowledge, skills, or behaviour [1]. The UK National Student Survey has repeatedly identified feedback as an area in need of significant improvement [2]. We have responded by designing a novel tool, the FEEDBK model, to enhance the feedback experience for both student and teacher. The model presents a feasible means of providing feedback in busy clinical settings. It provides teachers with a framework to communicate concise yet effective learning points in less than 5 minutes. The student and teacher should agree on the Focus of the learning opportunity mapped to the curriculum and assessments. The student then Evaluates their performance with the aim of promoting reflective practice. The teacher gives non-judgmental feedback on the Encounter, e.g. communication skills and professionalism. This is followed by specific feedback on one task the student should Do/should not do and one suggestion for something they could do Better. The feedback is concluded with one Key take-home message. The tool has been successfully piloted in an outpatient setting with undergraduates. We aim to evaluate the tool in an inpatient setting, in a central London teaching hospital, with 3rd year students. The FEEDBK model will be introduced by teaching fellows in January 2016.

Methodology
All year 3 students attending a London teaching hospital for their attachment in medicine or surgery (30-35 students) will be informed about the FEEDBK project. Teaching fellows will implement FEEDBK into their practice from week 4. All students will be given an information sheet and invited to participate (ethical approve gained). Students will be asked to fill out two questionnaires, at week 3, prior to FEEDBK, and at week 9, post FEEDBK implementation. We also aim to recruit 10 firm representatives to participate in two focus groups at week 3 and week 9. Focus groups will be run in groups of 4-6 and will be audio-recorded.

Proposed method of data analysis
Questionnaire data will be analysed for trends in students’ perceptions about the quality, quantity and utility of feedback at week 3 and 9. Focus group data will be transcribed and NVivo will be used to sort and code data into themes to facilitate deep and meaningful analysis.

Results
It is hoped all data will be analysed by May 2016, ahead of ASM July 2016.

References
Experiences with Team-Based Learning (TBL): Should We Consider Establishing A UK-based Collaborative TBL Network?

S Khogali
S Khogali, Clinical Senior Lecturer in Medical Education, School of Medicine, University of Dundee, Ninewells Hospital & Medical School, Dundee DD1 9SY

Background and Purpose
Team-based Learning (TBL) provides a structured approach for flipping the classroom\(^1\). This paper aims to: (1) share some of the experiences in using TBL in the undergraduate medical curriculum at the University of Dundee (2) discuss the needs for, and the potential benefits of establishing a UK-based collaborative network on TBL.

Methodology
The TBL strategy provides students with opportunities for problem solving, inter-team discussions, and immediate feedback. It also provides opportunities to hold individual students accountable for their pre-class preparation and their input to a team. An innovative technology-enhanced approach to TBL has been developed and successfully used at the University of Dundee School of Medicine\(^2\).

Results
Experiences have been gained with the implementation of TBL, as a learning method, in the undergraduate medical curriculum at the University of Dundee. Some of the experiences, which led to successful implementation of TBL, will be shared.

Discussion and Conclusions
TBL may offer some benefits to UK medical education\(^3\). However, TBL is a challenging strategy to implement. An international TBL collaborative network exists, with members mostly based in North America\(^4\). The needs and benefits of establishing a UK-based collaborative network on TBL will be discussed. The benefits of such network may include, sharing of TBL expertise for purposes of staff development and research on the effectiveness of TBL in a UK context of medical education.

References
Explore the role of personality and eagerness in undergraduate high fidelity simulation performance

R Vithlani, L Springford, C Hall, A Sam
R Vithlani, Surgical Teaching Fellow, Imperial College Healthcare NHS Trust, Medical Education Research Unit, Imperial College London

Background and Purpose
Simulation heightens concentration, improves acquisition and retention of knowledge and allows students to practise high risk low frequency events in a safe learning environment. Simulation provides high validity methods of assessment of health care professionals’ aptitude and enables good feedback. Hence it is being used more commonly in training doctors and medical students in the NHS. Studies looking at Meyers-Briggs type indicator tests (MBTI) and medical student began 50 years ago, however little is known about personality types and high fidelity simulation training. The aim of this study is assess the role of personality and eagerness in undergraduate high fidelity simulation performance.

Methodology
All final year medical students (approximately 40) from the Imperial College Health Trust (ICHT) sites in their last medical and surgical rotation will be offered a chance to participate in this study, pending ethical approval. Students will be given an information sheet and consented. We will ask them document their out of hours work (outside of Monday-Friday 9am-5pm) during their placement and ask them to undertake a MBTI. Students will be randomised into groups of 10 for the simulation sessions. A predetermined questionnaire measuring confidence, clinical aptitude and assessment, leadership, communication, patient safety will be taken pre and post course.

Results
We will compare the students’ MBTI against the national average. Each variable in the pre and post questionnaire will be compared with the MBTI as well as performance in simulation. In addition to this students’ eagerness (measured by their out of hours work) will be compared with their personality and performance in simulation. Following statistical analysis we will measure any significant correlations between the MTBI characteristic, eagerness and performance.

Discussion and Conclusions
We will discuss any correlations found between certain personality types, eagerness and performance in simulation. This study hopes to shed light on whether simulation training benefits students with a certain personality type more than others. We also hope to demonstrate a relationship between students’ prior experience (out of hours and on call) and simulation performance. If successful this could be used to help tailor simulation training amongst student groups to optimise learning as well as performance in clinical exams.

References
Guide to Surgical Placement for Third Year Medical Students; How to Maximise Learning Opportunities

K E A Gardner, C M S Pye, D Hunukumbure, S Das
K E A Gardner, C M S Pye, D Hunukumbure Clinical Teaching Fellows, Hillingdon Hospital NHS Foundation Trust and Honorary Lecturers, Imperial College London.

Background and Purpose
Surgical placement in third year curriculum holds a unique place as it is the first opportunity the medical students are exposed to the world of surgery. The hospital provides the students with multiple learning opportunities yet many fail to recognise them¹. The main contributing factor is the lack of guidance to prepare the students for this new learning environment². This can particularly be the case for third year students as their learning in the first two years of medical school is largely through didactic teaching in the non-clinical environment, and self-guided learning in a clinical context is unfamiliar to them. A positive experience during undergraduate surgical placement has been shown to influence more students to pursue a career in surgery³.

We have created a booklet, in conjunction with the lead surgical consultants at Hillingdon Hospital, to advise the students of learning opportunities within surgical specialities. It aligns with the National Surgical Curriculum¹ and includes the learning outcomes of Imperial College London, core conditions and key questions for each speciality.

Method
We introduced the booklet in paper and electronic formats to the 3rd year students at the start of their first surgical attachment. We evaluated how useful the students perceived it to be using a questionnaire at the end of their surgical placement.

Results
Our results showed that all of the students had used the guide. 54% of students found the guide useful in finding learning opportunities, however, only 36% found it useful specifically in theatre. 81% found both the list of core conditions and learning outcomes useful. Half of the students preferred the booklet in paper format, a quarter preferred it as an electronic book and another quarter in both formats.

Discussion
The students overall found the guide to be useful, particularly in highlighting their learning outcomes and core conditions in the different surgical specialities. Fewer students found it useful in identifying learning opportunities which was the intended main purpose of the booklet as opposed to being a workbook mapping the curriculum. This may be because the students are more familiar with the traditional structured learning. To help overcome this we plan to include an introductory session on how to maximise use of the guide for the next group of third year students.

References
Hearing Adolescent Voices: Using age-appropriate standardized patients to teach health issues in an undergraduate setting

F E Rae, J Stewart, B Bateman
F E Rae, Clinical Teaching Fellow, North Tyneside General Hospital, Northumbria Healthcare NHS Trust, Rake Lane, North Shields, Tyne and Wear, NE29 8NH

Background and Purpose
The use of age-appropriate actors as standardized patients (SPs) is an emerging teaching method\(^1\,\,^2\) because of the recognised deficiencies associated with adults role-playing adolescents.\(^3\) Several studies have described the educational gains from using adolescents when teaching communication.\(^1\,\,^2\,\,^4\) Our novel initiative additionally used adolescent actors in an acute simulation scenario. The purpose of the research was to uncover the educational impact on medical students from participating in a health-education session using age-appropriate SPs.

Methodology
Four adolescent actors (ages 15-16) were recruited as SPs for final year medical students. The topic, ‘drunk unconscious teenager’, was taught using acute simulation followed by role-play of the ‘morning after’. In groups of 6-7, students worked in simultaneous interviews with a facilitator and adult actor playing the mother. The session was evaluated using a feedback form asking five open questions to explore: what they gained from the session and why; the activities they struggled with and why; and their comments on the use of adolescent actors. Free-text responses across all the questions were categorised.

Results
There was 100% (n=19) response rate from the students. The responses could be grouped into categories of ‘knowledge gains’, ‘shifts in perspective and understanding’, ‘practical skills developed’ and ‘reflections on the learning process’. New knowledge gained was described in the areas of consent, confidentiality and safeguarding; medical management of reduced consciousness and the ‘adolescent history’. Regarding developments in understanding, students reflected on a greater appreciation of the challenge of sexual histories, the need for a sensitive approach, and the impact of their inexperience. Furthermore, students reported they gained practical skills in communicating sensitively, how to phrase questions and how to ‘deal with’ parents. Finally, although there were concerns raised as to the costs versus the benefits of the activity, the students reflected positively on the utility of using age-appropriate SPs. The added ‘realism’ was thought beneficial as were the benefits of the added emotional challenge from feeling ‘awkward’ and ‘uncomfortable’.

Discussion and Conclusions
The findings suggest students perceived educational gains from utilising age-appropriate SPs in simulation and role-play scenarios. An unexpected result was the impact the adolescent actors had in provoking discomfort and awkwardness in the students which enhanced their learning, a feature not well established in the literature. Further investigation of this interesting association could develop teaching practices in simulation and communication role-play. In conclusion, this educational initiative demonstrated that using age-appropriate ‘real’ adolescent SPs works well to develop students’ knowledge, understanding and communication skills.

References
Increasing the speed of feedback loop closure: a pilot trial investigating the utility of ‘microfeedback’ during a two-day clinical orientation course

AA Gopal, D Pan, E Chang, N L Mudalige, J Barker, L Peters, H Knowles, T Rawson, J Pitkin, A Sharif

AA Gopal, Hull and East Yorkshire Hospitals NHS Trust, Anlaby Road, Hull, East Riding of Yorkshire, HU3, 2JZ, UK; hyag1@hyms.ac.uk

Background
Tutee-centred evaluation of educational interventions is essential¹, and feedback questionnaires have traditionally provided subjective data on effectiveness of interventions; however, they can be time-consuming to complete and subject to recall bias. In response to the increasing demand for speed and brevity of information transfer – as evidenced by the popularity of microblogging media² such as Twitter³ – we piloted a “microfeedback” (MFB) system at a regional two-day teaching course⁴. This course, aimed at medical students in their first clinical year and taught by foundation year trainees from four different foundation deaneries, consisted of small group teaching sessions delivered in a round-robin format.

Methods
A paper-based MFB questionnaire was designed with the intention of immediately and accurately capturing the tutee’s emotional and cognitive response to the session and tutor, comprised of Likert rating scales and free text boxes for comments that were later thematically analysed. The questionnaire had an estimated completion time of one minute; it was completed by delegates at the conclusion of each session and reviewed by the tutor prior to the start of the following session. The format of the MFB questionnaire was assessed by an overall exit questionnaire. Teaching session quality assurance was set by direct observation of educational practice by a teaching fellow from the host institute, along with consultant input on design and content of the course itself.

Results
All 34 students participating in the course completed the MFB questionnaires, and the majority 83% (n=28) of delegates indicated they preferred MFB to traditional forms. On a Likert scale of 1 (very poor) to 5 (excellent), MFB was rated 4.53 (SE 0.13, SD 0.70). Qualitative responses were overwhelmingly positive; on thematic analysis of free text feedback three major themes emerged; namely, those of speed, timing, and ease of form completion. All tutors indicated a preference for the system; they found the immediacy of the feedback loop⁵ helpful in adapting their teaching for the subsequent session.

Conclusions
Our MFB system was well received by faculty and delegates. Based on our experiences we would recommend this approach for obtaining rapid, high response rate feedback in evaluation of multiple teaching sessions. However, we recognize the limitations of this pilot study in assessing the utility of this feedback model and intend in the future to prospectively compare the efficacy of MFB with more conventional feedback models.

References

167
Learning to pass it on: An evaluation of a novel undergraduate ‘PeerShare’ scheme

H E Anderson-Knight, K M Cullen
K M Cullen, Clinical Senior Lecturer (Education), Centre for Medical Education, Queen’s University of Belfast, Belfast BT9 7BL

Background and Purpose
We describe a novel student-led scheme (‘PeerShare’) in which final year ‘Foundation 0’ (F0) medical students met in small groups with third year students (3Y) to practice and improve clinical skills.

Methodology
All final year (F0) and third year (3Y) students at Queen’s University Belfast 2014-15 were invited to participate in the pilot of ‘PeerShare’ via email. Three F0 and six 3Y places were allocated on a first-come, first-serve basis in each of the five Hospital Trusts in Northern Ireland. Groups consisted of triads of one F0 and two 3Y. The project ran for 5 weeks (March to May 2015) to coincide with the final year apprenticeship (F0) scheme. Groups were asked to meet a minimum of three times during the period. F0 students were given a one-to-one induction by academic staff but teaching was student-led and content decided upon by each triad. Feedback from the scheme was gathered during a focus group after the scheme was completed.

Results (2015 data listed here; 2016 data will be available for conference)
Seventy-four F0 (30%) and fifty-five 3Y (22%) registered interest. Forty-five students were selected and all those starting the scheme went on to complete the programme. Groups met once per week for two hours, increasing to twice per week due to interest. Topics covered varied by triad but common themes included IV fluids, ECGs, chest x-rays, and neurology. 3Y students reported increased confidence and decreased anxiety as a result of participating in ‘PeerShare’. F0 students described the scheme as rewarding and a vital teaching experience. All who participated believed that ‘PeerShare’ should remain as a non-compulsory option and be made available to all interested 3Y students.

Discussion and Conclusions
‘PeerShare’ established that final year students are keen to share knowledge and that third year students have a thirst to be taught. ‘PeerShare’ also allows F0 students to practice teaching before they enter the wards as Foundation Doctors. Educating colleagues is a professional obligation and a skill that doctors will use and develop throughout their career. Extending the opportunity to develop this skill as an F0 will help our graduates in the future.
Living with ‘cancer’…for a day: a phenomenological analysis of medical students’ experiences

GJ Gormley, G Roulston, M Corr, T Dornan, N King
GJ Gormley, Centre for Medical Education, Queen’s University Belfast, N Ireland.

Background and Purpose
Medical education faces challenges in promoting more empathic and compassionate doctors.[1] Recent efforts to increase students’ empathy through reading and discussing literature may help in the short-term, though results have been inconsistent.[2] Doctors who have become patients themselves, appear to have increased empathy to their patients.[3] Though we do not want medical students to experience actual illness, we however need to develop approaches that enhance their empathic responses to patients. Malignant melanoma is a form of skin cancer that can have devastating consequences for both patients and their relatives. Melanoma transfer tattoos provide a realistic visual representation of an actual melanoma.[4] In combination with a patient narrative, such an experience may potentially provide some insights of having a melanoma diagnosis. The study aims to explore how medical students describe their lived experience of having a simulated melanoma experience.

Methods
A phenomenological approach was used to explore students’ lived experiences in this study. Using convenience sampling, 4th year medical students at QUB were invited to participate in the study. As typical in phenomenological studies, we aimed to recruit up to 5-10 subjects. Participants had a melanoma transfer tattoo applied to their forearm and listened to an audio narrative of a patient who had been diagnosed with melanoma. Participants were then asked to go about their typical day and make 4 audio-diary recordings about their experiences. Following this they were interviewed face-to-face and asked to provide a follow-up audio-diary about 6 months after wearing the tattoo. Audio-diaries/interviews were transcribed verbatim. Template Analysis was used to qualitatively analyse the data.

Results
Ten participants took part in the study, providing over 500 mins of audio-data. Analysis yielded 4 main themes: (1) Cancer simulation: opening up new experiences (2) Reaction to ‘cancer’: drawing upon past experiences (3) ‘This could be me?’ (4) Holistic care: Reflections as future doctors.

Discussion and Conclusions
This study provides insights into medical students’ experiences of ‘living’ with a simulated cancer diagnosis. The simulation technique appears to facilitate an embodied learning experience for students. Students drew upon previous experiences, such as illness both in themselves and others, providing a perspective on cancer-patients’ lifeworlds, as they interacted with family and friends. Such an experience stimulated a critical reflection on their holistic approach to patients as future doctors, which persisted 6 months after the experience. This study suggests potential pedagogical opportunities for providing medical students with insights to aspects of cancer-patients’ lifeworlds.

References
Medical students, army training, leadership and teamwork

J Garner, J Earis, J Jenkins, V Jha.
J Garner, University of Liverpool, School of Medicine, Cedar House, Ashton Street, Liverpool, L69 3GE

Background and purpose
A new MBChB curriculum was implemented at Liverpool from 2014. As increased emphasis is being placed upon leadership skills for doctors\(^1\), an innovative interactive approach was taken to embedding this topic in the new programme. In partnership with British Army 208 Field Hospital (Liverpool), the University developed an overnight training course for first year medical students giving them direct experience of leading a team and working together on a range of physical and mentally challenging tasks.

Methodology
Students were required to complete a 1000 reflective learning assignment on their training experience, and how it impacted upon them. This information was thematically analysed and coded\(^2\) to identify what students had learned, their reaction to different aspects of the training and how it might impact upon their behavior, attitudes and working practice.

Results
In order to complete assigned tasks, students reported they had to ensure all their team members were involved and listened to. They learned the importance of effective communication, giving clear instructions and when it was appropriate to ‘lead’ and ‘follow’. As the teams got to know each other, they became better at recognizing each other’s strengths and weaknesses and assigned roles more efficiently. In particular, students who were initially quiet began to participate and speak up more, gaining confidence as they progressed through the course. At the end of each exercise feedback was given on the team’s performance, and students received this positively.

Discussion and conclusions
The range of activities students were involved with tested their perceptions of themselves and each other, enabling them to extend their friendship groups and to try new ways of working. In particular with physical tasks, the support and encouragement of team mates was essential to completing the activity. Students learn best by doing – giving them the opportunity to learn from direct experience of leadership has developed and enhanced student’s team working and communications skills. In accordance with recent guidance\(^3\), we will continue to develop future training on leadership for students.

References
Medical students’ conceptualisations of the influences affecting their decisions for or against a career in general practice?

Nicholson S, Hastings AM, McKinley RK
S Nicholson, s.nicholson@qmul.sc.uk

Introduction
Despite longstanding concerns about recruitment to UK general practice there has been no concerted educational intervention. Counter-intuitively, the proportion of time a UK medical student spends learning in UK general practice has decreased and national policy interventions to fill increased training places for general practice have been unsuccessful.

Aims and Objectives
We examined how medical students’ experiences of the undergraduate medical curriculum may affect choosing general practice as a career. This includes whether and how differences in student perceptions of culture, curriculum philosophy, design and intent between medical schools may significantly influence students’ preferences.

Methods
A range of UK medical schools’ students were invited by email to participate in focus groups and return a questionnaire which asked their career choice to facilitate sampling students with varied career preferences. Focus groups were audio taped, transcribed and anonymised for both school and participant. Transcripts were thematically analysed combining empirical coding of data with the application of relevant concepts which had been identified a priori from the literature. Research ethics approval was granted.

Results
Six focus groups were convened. Some student participants’ career aspirations are strongly shaped by family and home. However, clinical placements remain important in confirming or refuting these choices. High quality general practice attachments are a powerful attractor to general practice, combat “GP-ism” and are most useful when reflecting authentic clinical practice which also promotes general practice as a career. GP tutors can be powerful positive role-models. Students’ comments revealed sometimes conflicting understandings about general practice; seen as both boring (because of the lack of perceived autonomy and interesting patients), and stressful (because of the workload and a sense of isolation). Students had concerns about becoming “good GPs” some students only wanting to do it if they felt they could do it well. Some students feel coerced into GP and perceive that medical schools may act as “GP factories”, an impression reinforced by how students sometimes (mis)interpret the curriculum.

Discussion and Recommendations
Students’ decision making with regard to careers is complex. Early, good, on-going and, importantly, authentic clinical exposure within community settings promotes general practice as a career option and combats negative stereotyping. We did not find any significant differences between schools in students’ perceptions of general practice.
Recommendations include increasing authentic exposure to general practice, effectively convey what it means to be a “good GP” and that this is achievable, adopting ‘zero-tolerance’ of ‘GP-ism’.

Preparation for Practice: A Novel Role for General Practice in Pre-Foundation Programme (FP) Assistantships

PSJ Ryan, GJ Gormley, ND Hart
P Ryan, General Practitioner, Ravenbank Surgery, 113 Ravenhill Road, Belfast BT6 8DR

Background and Purpose
Hospital-based undergraduate pre-foundation assistantships are now widely established in most UK medical school curricula and beyond. They are considered to improve graduates’ preparedness for practice\(^1\) and smooth the transition to the FP doctor role\(^2\). FP doctors play a key team role in ensuring patient safety during their complex transitions across the hospital / primary care interface, and their self-reported preparedness for practice still varies considerably\(^3\). We sought to explore what spending one week of the FP assistantship in General Practice might add.

Methodology
We solicited 50 reflective audio diaries from final year medical students as they took part in a one-week GP attachment during pre-foundation assistantship, and performed an iterative thematic analysis on the transcripts.

Results
Students described rich and diverse learning, resulting in improved preparedness for practice in clinical, personal, and professional domains, positively impacting on how they might approach patients in the future. Students’ self-confidence improved due to affirming assessment outcomes and feedback from tutor mentorship.

Students deepened their understanding of community healthcare and role of the GP; and seeing the ‘Patient Journey’ across the hospital / primary care interface from both the primary care team and the patient’s perspective helped them to prepare for their role as junior doctors in managing it.

Discussion and Conclusions
We conclude that this novel GP component distinctively contributed to participants’ preparedness for Foundation practice. It aligns with published recommendations about extending the current assistantship model to different care settings and addressing professional and ethical issues. We suggest it might be incorporated more widely into Assistantship curricula.

References
Background and Purpose
The use of high fidelity simulation has fast become the gold standard when recreating the realism and stresses of acute clinical situations whilst simultaneously retaining a safe learning environment. As medical schools invest heavily in simulation, many healthcare professionals may find themselves at the forefront of this teaching method. The ability to perceive the stress experienced by students in this environment is extremely beneficial, allowing tutors to adapt and guide learning to suit individual learning needs. However, as facilitators we often assume proficiency in recognising stress. To date, research has focused on the stress caused by this teaching method and the effects on students’ performance rather than the means and accuracy of facilitator perceptions of stress. Our study investigated the facilitator’s ability to adequately perceive the degree of stress being experienced by the learners. We proposed two enquiry goals, firstly to understand what indicators of stress the facilitators recognised in students during a simulated session and secondly, whether the facilitator’s perception of student stress matched the self-reports from students.

Methods
We generated a stress resource from a pre-existing teaching session: a 30-minute ward-based simulation exercise, where final year medical students simulated the role of an F1 on-call. This covered: taking a handover, dealing with referrals and tasks, along with assessing unwell patients. From three student recordings using video, volunteer students were asked to review their own performance immediately afterwards, plotting their experienced stress levels on a Likert scale (1=minimal stress, 10=maximal stress) at 5-minute intervals. One recording was randomly selected for the study. Six members of the teaching faculty, all of whom are rotation leads at Northumbria’s Base Unit, were asked to review the video, recording at the same points as the student, how stressed they perceived the students to be and the behaviour they were recognising to justify their score.

Results
The statistical analysis of the data is on-going, but provisional analysis suggests that the facilitators over-reported the experienced stress of learners. Of the 42 responses made by the tutors, 27 of them were rated above the students. Signs recognised included: flushing, sweating and changes in speech, with different tutors noting different signs at the same points in the video.

Conclusion
The initial findings of this study has highlighted to us as a faculty that there is a need for training within our department to enable facilitators to better judge stress in learners, ultimately creating a more positive and realistic learning experience.

References:
Teaching Deep: Using the Experiences of Teaching and Learning (ETL) Questionnaire to assess the curriculum at the Swindon Academy

DN Majumdar, A Woodman, E Fowler, C Banks, K Jones
DN Majumdar, Assoc. Clinical Teaching Fellow, Undergraduate Academy, Great Western Hospital, Swindon, SN3 6BB

Background and Purpose
Thirty years of research highlights the importance of the attitude and approach of the learner to the outcomes of the learning experience.\(^1,2\) Three approaches have been identified: Deep, Surface and Strategic. Students adopting a deep approach are motivated by a keen (intrinsic) interest in the subject matter; they seek to understand and critically appraise, and relate concepts to previous experience. In contrast, surface learners are motivated to attain sufficient knowledge to pass assessments (or by a fear of failure); and in order to do this may adhere to rote learning from a syllabus. The motivation of a strategic learner is to achieve a good outcome; they manage their time well and focus on exam technique. Associations have been found between learning approaches, age, prior undergraduate experience and exam performance.\(^3,4\) It has been suggested that adopting a surface approach as an undergraduate correlates with reporting a high workload and burnout years later, as well as personality traits of neuroticism and low conscientiousness.\(^5\) One’s approaches to study are not necessarily a permanent trait of the self: effective formal education can alter learning styles and self-direction can be learned, and taught.\(^6,7\) We aim to gain a ‘snapshot’ of the approaches to learning of students at the Swindon Academy of the University of Bristol Medical School, with regards to individual learning encounters. We would like to assess if some teaching ‘blocks’ encourage a deeper approach to learning than others.

Methodology
Students will be asked to complete the validated ETL Questionnaire on the final week of blocks of teaching.\(^8\) Results will be analysed for year group, age, gender and prior undergraduate experience. Details of each block will be sought from timetables with regards to the prevalence of simulation, case-based learning, didactic teaching and assessment.

Results
Data will be summarised using descriptive statistics and ANOVA.

Conclusions
Taking into account students’ learning styles can potentially influence the quality of teaching and learning at the Swindon Academy. There is scope for further investigation taking into account assessments and future career implications.

References
3. Aaron S. Correlation of students' characteristics with their learning styles as they begin medical school. 1999. Academic Medicine
5. McManus IC, Keeling A, Paice E. Stress, burnout and doctors' attitudes to work are determined by personality and learning style: A twelve year longitudinal study of UK medical graduates. BMC Medicine 2004, 2:29
6. McManus IC, Keeling A, Paice E. Stress, burnout and doctors’ attitudes to work are determined by personality and learning style: A twelve year longitudinal study of UK medical graduates. BMC Medicine 2004, 2:29
8. ETLQ 2002, ETL Project, Universities of Edinburgh, Durham and Coventry (http://www.ed.ac.uk/etl)
Background and Purpose
The valuable role of experienced healthcare professionals in training throughout medical careers has long been acknowledged [1], and much research has been undertaken to compare differing teaching methods within undergraduate medical education. In addition, the role of patients as a teaching resource has also been explored. As well as highlighting improved student satisfaction with patient-led teaching over theoretical learning, studies have also found the former to be associated with better examination results [2].

The aim of our study is to demonstrate the importance of dedicated teaching clinics within medical education, and the valuable role both clinicians and patients have as tutors of medical education.

Methodology
Previous studies examining the success of differing teaching methods were critically analysed, before drawing upon their findings to identify a set of "needs" that were to be met within our clinics. Our clinics were then audited, through the use of questionnaires, to evaluate both student and patient satisfaction (Likert scale).

Results
27 students at the end of their year were asked a series of "yes/no" questions related to the educational value of clinics, their career aspirations, and the overall running of the teaching programme. We received feedback questionnaires from 27 patients who participated in dedicated-teaching clinics over the same year (77% respondent rate).

96% of students rated this teaching method as either "good" or "excellent". All students agreed that, following involvement in these clinics, they were more confident in their history taking, clinical examination, and management of orthopaedic problems. All students found this experience beneficial for their OSCE examinations and for the role of a junior doctor. All patients "strongly agreed" or "agreed" that this was a positive experience, and that they were happy with the clinical consultation. Similarly, they all agreed that they were confident in the way medical students were being trained.

Discussion/Conclusions
It was Sir William Osler who first said that the "best teaching is that taught by the patient himself". Through examining the literature available, and with the results of our student survey, the authors were able to suggest how to run a dedicated teaching clinic as an effective teaching method. The results of our audit found patient-led clinics to be a relevant teaching method, beneficial to both students and their patients. The authors commend this teaching method, and believe it has a valuable role in the undergraduate curriculum, alongside more traditional teaching methods.

References
Teaching the Teachers: equipping tomorrow’s doctors

C Banks, R Holman, J Barr, K Else, J Moffatt
C Banks, Clinical Teaching Fellow, Swindon Academy, Great Western Hospital, Marlborough Road, Swindon, SN3 6BB.

Background and Purpose
Teaching forms a key component of medical practice; however we found a disparity between what is expected of our junior doctors and training in teaching skills. Studies show medical students with a better understanding of teaching principles may also become better learners and communicators. In conjunction with the TLHP team, we developed an opt-in two-day medical education course for 3rd and 4th year medical students undertaking an external Student Selected Component module at Swindon Academy, Great Western Hospital.

Methodology
The course covers key aspects of education theory. 63 students attended over three years and data was collected using simple paper questionnaires, evaluating aspects of the course. Questions were asked on a semantic differential scale of 1-10. Qualitative data was collected using free text boxes and thematic content analysis performed. The questionnaire evaluated aspects of the course and student’s views on whether it should be offered to all medical undergraduates.

Results
The overall student rating of the course was overwhelmingly positive with a mean rating of 8.1 from all 63 students. Further analysis of 51/63 students of before and after comparisons of confidence in teaching overall (4.9:8.2) (P<0.001) confidence in planning a teaching session (4.5:8.2), (P <0.001) confidence in providing feedback (5.2:8.3), teaching in the clinical environment (4.4:7.8) and awareness of different learners (5.8:8.6).

Discussions & Conclusion
The positive results demonstrate that this two day medical education course is effective way of improving medical students confidence in teaching, which is a vital asset of a junior doctor.

References
2. Dandavino M, Snell L, Wiseman J. Why medical students should learn how to teach, Medical Teacher 2007; 29: 558-565
The ‘Introduction to Clinical Medicine’ workbook improves student learning and behaviour during transition between pre-clinical and clinical settings

Hogan SC, George M, Halse O
Hogan SC, Charing Cross Hospital, Imperial College London, Fulham Palace Road, London, UK, sarah.hogan@imperial.nhs.uk

Background and Aims
Transition from pre-clinical to clinical settings is well known to cause anxiety in students\(^1,2\), with stress factors including lack of sufficient introduction to the new setting\(^3\), professional socialisation\(^4,5\), and suboptimal feedback\(^6\). In response to this, the ‘Year 3 Workbook: Introduction to Clinical Medicine’ was created, which presents the 3\(^{rd}\) year student with structured learning objectives during the first weeks of their placement. A feedback session highlighted common themes and issues encountered. The aim of the study was to assess the utility of the workbook and feedback session as a learning tool and its success as a transitional aid.

Methods
All 34 students attending their first clinical rotation were asked to complete an online questionnaire pre- and post-workbook, allowing comparison of their understanding of the following domains: professionalism, the National Early Warning Score, the multidisciplinary team, the patient journey and the ward round. A focus group session was performed one week post-workbook, and responses were analysed by thematic analysis and peer-to-peer discussion.

Results
The pre- and post-workbook questionnaires were completed by 34 and 22 students respectively. Following the use of the workbook, the percentage of students reporting an improved understanding increased in all domains. Notably there was a 76% rise in number of students reporting understanding the NEWS score and a 40% increase in those who had discussed professional roles with other MDT members. Post-workbook, all students had spoken to a patient about their feelings, compared to 82% pre-workbook, and there was 44% rise in the number of students who knew where to find advice on ethical dilemmas. All four focus-group members reported that the workbook was useful for their learning, particularly for their understanding of the ward and in building relationships with ward staff, and that they would recommend it to others.

Discussion and Conclusions
Lack of guidance regarding professionalism\(^2\) and the process of providing care\(^7\) are key stress factors during transition that can be alleviated by providing adequate support\(^2\). Our workbook addressed this by providing the student with ward-based learning objectives, which were met through structured observation and targeted interaction. Our study shows that this intervention and the subsequent feedback session improved 3\(^{rd}\) year MBBS student learning behaviour on the wards and their understanding of key issues met during this crucial time in their training.

References
The impact of FY0 assistantship on perceived preparedness for work: an audio diary study of the student experience

E Toner, P Watson.
E Toner, ST6 Medicine; Postgraduate Student (Masters in Medical Education), Queen’s University, University Road, Belfast. BT7 1NN

Background
In 2011/2012, an assistantship programme was introduced at Queen’s University, Belfast, following GMC recommendations. This aimed to ease the transition into working life by encouraging final year students to perform the duties of a foundation year one doctor (FY1) under close supervision.

A study by Braniff et al evaluated how the assistantship affected students’ preparedness via questionnaire before and after completion of assistantship. The results were favourable, indicating the programme prepared the students well in a breadth of clinical areas. This study aims to investigate these findings in more depth to ascertain how assistantship improves preparedness.

We hope the results will provide valuable insight for the coordinators of the assistantship programme to allow course improvement and strengthening the skills set of our future FY1s. This will have positive implications for clinical teams throughout the region.

Aim
This study aims to further understand how the FY0 assistantship impacts on medical students’ preparedness for work.

Methodology
Following on from the previous questionnaire based study, we will invite QUB final year medical students to participate in the completion of a prospective qualitative study using audio diaries during their FY0 assistantship between March and May 2016.

Twelve students will be selected to best match the demographics of their year group with respect. Participants will be asked to submit audio reflections via a recording pen drive.

These entries will be anonymised, transcribed and interpreted using phenomenological analysis/thematic analysis by myself.

The sample size of 12 should produce a manageable amount of qualitative data to transcribe and interpret whilst providing responses from different genders and ethnic backgrounds. There are no specific exclusion criteria.

Results
The project is currently being undertaken. We hope to have preliminary results available at the time of the conference.

References:
2. Braniff, C., et al., Assistantship Improves Medical Students’ Perception of their Preparedness for Starting Work, (awaiting publication)
The introduction of online learning materials directed towards written clinical skills training for medical undergraduates: A survey evaluation of perceived benefit.

E Lea, V Ware, S Hill
E Lea, Teaching Fellow, Clinical Learning Centre, Royal Victoria Infirmary, Queen Victoria Rd, Newcastle upon Tyne, Tyne and Wear NE1 4LP

Background and Purpose
There is concern, from students, clinicians and educators, that graduating medical students are underprepared for practice\(^1,2\). The Newcastle University MBBS course has introduced a series of written clinical skills assessments – the ‘Written clinical Skills Examination’ (WriSkE) - commencing in the first clinical training year (year 3).

The WriSkE syllabus includes prescribing (medications, oxygen and fluids), interpreting and reporting routine investigations (ECGs, ABG and plain radiographs) and completing clinical documentation. The aim of written clinical skills teaching is to reduce the gap in ‘real world’ skills in undergraduates before they enter clinical practice as junior doctors.

All year 3 students in our unit (n=94) were sent the online learning package weekly for 12 weeks. Use of the material was voluntary. The material consisted of a clinical vignette relevant to the week’s speciality, followed by related ‘written skills’ questions. At the end of the week the students received answers with systematic explanations. We believe the practical skills and knowledge required in the clinical environment are best learned when situated as closely as possible to clinical practice, hence the use of clinical scenarios.

This practitioner research study aims to improve the WriSkE learning package for future cohorts.

The purpose of this study is to evaluate students’ opinions of the benefit of this new learning material in preparation for clinical practice, including specifically their self-confidence\(^3\) in performing such written tasks. Furthermore we wish to explore the barriers learners experienced when trying to undertake this learning.

Methodology
To evaluate learners’ views we used a survey methodology. We sent an electronic questionnaire to all year 3 MBBS students attached to our unit. Most questions were quantitative in nature. Analysis will be by simple descriptive statistics including correlation between self-reported use of the preparatory material with perceived benefit (Pearson’s correlation with significance test).

Results and discussion
Questionnaire data is not available at the time of abstract submission as is currently being collected.

References:
3) Burford B and Vance G. When I say…preparedness. Medical Education. 2014;48:849-50
The medical student at a cardiac arrest – the elephant, or mouse, in the room?

C Earnshaw, H Chant, G Kneepil, CD Rodd
C Earnshaw, Clinical Teaching Fellow, Gloucestershire Royal Hospitals NHS Foundation Trust, GL1 3NN

Background and purpose
There is no literature to date on the role of medical students in resuscitation or cardiac arrest. Multiple studies discuss the feelings of medical students towards resuscitation and Do Not Attempt Resuscitation orders on patients (1)(2)(3) and demonstrate a lack of confidence and a feeling of exclusion from the team (3). Anecdotally medical students often stand back from a cardiac arrest or even disappear for fear of ‘getting in the way’. It is well reported that core knowledge is best learned when integrated with clinical practice (1)(2) and Kolb’s experiential learning theory supports this (4). This study hopes to identify the barriers which may discourage active participation to enhance the learning experience and ensure students feel capable of contributing to the resuscitation team.

Methods
Ethical approval was granted from Bristol University. Gloucestershire Hospital NHS Foundation Trust (GHNHSFT) R&D approval was obtained. 5th year medical students at Gloucestershire Academy and Core Medical Trainees at GHNHSFT were invited to participate in homogenous focus groups. An invitation email was sent to all potential participants and information sheets were presented and distributed at local teaching sessions. Semi-structured interviews were undertaken with senior resuscitation providers. Experiences and attitudes toward the roles of a medical student during resuscitation scenarios will be explored in focus groups. Thematic analysis to saturation point will be undertaken.

Results
Although student participation in resuscitation does occur it is largely limited to assisting chest compressions and barriers persist. Emerging themes from semi-structured interviews include:
- Student-based: Lack of confidence, lack of understanding of resuscitation team or resuscitation skills training, limited exposure to Emergency Medicine
- Clinician-based: Unfamiliarity with rotating students, lack of debrief
- Patient-based: Reduced number of cardiac arrests
These will be further explored in focus groups. Full data collection and analysis will be presented at ASME.

Discussion and conclusions
Encouraging active seeking of jobs within the resuscitation team can lead to improved understanding of core clinical knowledge and skills (4). Initial data highlights several barriers to medical student participation in cardiac arrest and resuscitation of the acutely deteriorating patient. Many of these could be addressed by delivering specific teaching and we propose that resuscitation skills, explicitly for medical students, be taught earlier in undergraduate medical training with emphasis on the multi-disciplinary team and student collaboration within this. This will be piloted in May 2015.

References
3. Understanding how basic life support training is utilised by our medical students on clinical rotation. Critical Care Medicine. 2014;42(12):0090-3493
Undergraduate Point-of-Care Simulation Training: A novel approach to supporting transition to practice


Fawcett, J, 1South Bristol Academy, School of Medicine, University of Bristol, Bristol, UK

Background

Simulation is an established method of training in undergraduate and postgraduate medical education. Use of repetition, feedback and a controlled environment are some key features that can lead to effective learning.(1) Point-of-Care simulation is an integrated approach involving simulators in the clinical environment, allowing additional individual and organisational learning outcomes to be explored, including orientation and effective team working.(2) Recent thinking suggests that undergraduates’ preparedness for the August transition to FY1 is sub-optimal, particularly in areas such as familiarity with the clinical environment and degree of multi-tasking.(3) To our knowledge, Point-of-Care simulation hasn’t been explored in terms of potential benefit to undergraduates, particularly during the transition from final year students to FY1 doctors.

Methods

A twice-weekly voluntary Point-of-Care simulation series has been set up for forty final year medical students during the ‘Preparing for Professional Practice’ course at the South Bristol Academy, University of Bristol. This cohort of students will be post-final examinations and undertaking their student assistantship. Scenarios will include the opportunity to triage tasks and assess a critically ill patient. Learning will take place through repetition and feedback sessions. Learning outcomes will include both clinical (assessment of the critically ill patient) and professional skills, with particular focus on organisation, coping with pressure and decision making. Effectiveness of the programme will be assessed by; pre- and post-course self-assessment of confidence in orientation to the clinical environment and observation of learning by an impartial assessor. Additionally, self-assessment of key professional behaviours will be undertaken.

Results

The results are awaited as students are just embarking on their student assistantship. The authors anticipate benefits to include; improved confidence in orientation to the clinical environment and development of professional skills such as coping with pressure and decision-making.

Conclusion

The introduction of a pioneering undergraduate Point-of-Care simulation programme aimed at final year medical students will be described. We believe Point-of-Care simulation is a novel method of delivering simulation to students during the transition from undergraduate to postgraduate practice which has additional benefits over traditional methods of simulation.

References:


Use of peer teaching to introduce teaching skills training to year 3 undergraduate medical students

A Chu, T Lwin, N Salooja
A Chu, Imperial College London, Faculty Education Office, Reynolds Building, St Dunstan’s Road, London W6 8RP

Background and Purpose
Peer and near-peer teaching are potentially powerful education tools\(^1\). Two–thirds of year 4 undergraduate medical students in our institution undertake extra-curricular near-peer teaching (e.g. clubs/ societies) to help younger students prepare for the year 3 OSCE assessment. Our curriculum already includes a compulsory teaching skills course in year 5; however, students and faculty identified a benefit of introducing teaching skills training in year 3. In line with Knowles theory of adult education\(^2\), previous experience of teaching-skill training indicated a preference for practical activities\(^3\). This is resource-intensive so we addressed this by involving peer-teaching in the one-day programme.

Methodology
A morning plenary outlining principles of practical skills teaching and feedback was followed by students peer-teaching examination skills in peer groups incorporating teacher, learner, observer (feedback). An afternoon plenary explained principles of assessment design followed by students designing their own OSCE stations in small groups and implementing it to each-other in a mock exam for peer feedback. Evaluation included peer evaluation by semi-structured discussion and student morning/afternoon feedback from a qualitative post-it activity; responses were recorded in Excel. Three researchers independently coded the items and discussed main themes to consensus.

Results
Peer evaluation indicated that workshops were feasible to implement and provided a good opportunity to highlight key education principles tailored to the needs of the participants. The most frequent theme from student evaluation was the value of practical experience (66/160 morning responses), in particular giving and receiving feedback with peers and developing a learner-centred teaching approach. Additional comments linked to peer-working indicated that this contributed positively to creating a safe environment and viewing others’ teaching styles, but working with peers who knew more than themselves raised concerns, as did practising a novice-expert model (Peyton model) with peers already competent in the skill.

Discussion and Conclusions
In line with the literature, use of peer-teaching networks contributed to a safe environment, provided cognitive congruence\(^1\) and gave us the resource to provide learners with practical experience that they valued.

Peer teaching generated concerns, however, where peers were perceived to have greater skills or knowledge than the teacher. Focusing a role-play task around a novice-expert model of peer teaching also proved difficult where the peer was already competent. We conclude that future involvement of peer teaching networks must address these points specifically by providing guidance for coaching learners of a similar or higher level.

References
What Makes A Good Doctor? Using Q Sort to Explore Medical Students’ Views

N Jones, A Bullock, E Muddiman
N Jones, Medical Student, Cardiff University, 12 Museum Place, CF10 3BG

Background and Purpose
Our aging population brings with it a multitude of medical and social needs. As a result, the relevance of different medical skills and competencies in the provision of healthcare is altering, and the ‘generalist’ agenda is gaining increasing attention. Newly qualified doctors need to leave medical school ready to develop skills to address the needs of patients today. Knowledge of medical student perspectives on what makes a good doctor in the context of the generalist agenda has the potential to inform future medical education and training. This research investigates medical students’ views on what being a good doctor means and explores differences by gender, year group (old and new curriculum) and specialty aspirations.

Methodology
As part of a larger on-going study, we collected Q-sort data and performed associated factor analysis, from year 3 medical students (n=12) on the new C21 curriculum and year 4 medical students (n=13) on the former curriculum at Cardiff University. The new C21 curriculum places greater emphasis on community-based medicine and learning through group discussion of ‘whole-patient’ cases.

Results
Distinct groups of participants emerge according to their perspective on ‘being a good doctor’. Some variation is linked to medical students’ future specialty aspirations, gender, and cohort/curriculum.

Discussion and Conclusion
We discuss the results of the factor analysis in relation to participants’ gender and specialty aspirations to explore whether or not the new C21 curriculum is developing students who are more aligned to the generalist agenda, and who may be better prepared for today’s patient needs. We conclude by suggesting directions for further research. These include comparing the Q sorts of these medical students to postgraduate trainees from the larger study, and studying patient perspectives of what being a good doctor means.

References
Papers Presented
outwith the Parallel sessions
ASME/GMC Joint

Excellent medical Education Awards 2016
Undergraduate Category:
The impact upon 4th year medical students and their supervisors of a one-year immersive community based medical clerkship in rural Scotland

S Law, F Muir
S Law, Senior Clinical Teacher, Head of uTCGP, School of Medicine, University of Dundee

Longitudinal integrated clerkships (LIC) are founded on continuity of care and of community of practice as an organising principle as this increases both patient and learner centredness. Most placements on undergraduate courses rarely allow students to become familiar with one set of faculty members or one group of patients for an extended period of time. Such continuity allows for the development of a learner-centred curriculum, a developmentally progressive curriculum and the ordering of educational tasks in sequentially increasing complexity (Holmboe et al, 2011).

Evidence from Australia, Canada and the USA suggests that longitudinal clerkships offer a way to overcome some of the issues raised above.

UoD Medical School plans to run its inaugural Longitudinal Integrated Clerkship in partnership with NHS Highland and NHS Dumfries and Galloway commencing Sep 2016. Nine students have accepted places on the scheme.

This research plans to investigate:

a. the development of the LIC
b. the students’ context of learning
c. the extent to which the programme met its original plan
d. the extent to which the LIC has met the needs of the participants

This presentation will discuss the development and design of the LIC, the plan to address the other research questions as well as plans for the future.
Postgraduate Category:
Roles Reversed: FY1s experiences of Student Assistantships as Supervisors

SE Wells, A Bullock, LV Monrouxe.
SE Wells, Academic Core Medical Trainee, Wales Deanery, Honorary Research Associate Cardiff University.
University Hospital of Wales, Heath Park, Cardiff, CF14 4XW

Background
Student assistantships are “a period in which a student acts as an assistant to a junior doctor, with defined duties under appropriate supervision”. In response to the lack of evidence concerning assistantship efficacy, recent publications provide evidence for the beneficial role of assistantships in enhancing graduates’ preparedness for practice. However, there remains a paucity of research concerning different assistantship models and considerable variability is reported in the availability of opportunities for medical students to undertake assistantships aligned with their first Foundation (FY1) post. At Welsh Medical Schools, the final clinical placement is 6-7 week assistantship. In 2015, for the 52% of graduates who would begin work within Wales, this placement was directly aligned with their first FY1 post. Utilising this “natural experiment” context, in May 2015 we commenced a longitudinal mixed-methods programme of research to explore how assistantship alignment influenced graduates’ experiences of transition-into-practice and their feelings of professional identity (PI), anxiety and burnout. We conducted narrative interviews with FY1s who had undertaken aligned and misaligned assistantships in Wales (June, September 2015 and January 2016) and with FY1s joining the Wales Foundation School who had undertaken an assistantship elsewhere in the UK (September 2015 and January 2016). Concurrently, all FY1s in Wales were invited to complete a longitudinal 3-phase online questionnaire containing validated scales for PI, anxiety and burnout.

Whilst our study highlighted differences in the relative efficacy of aligned and misaligned assistantships, it was not designed to investigate the impact of assistantship experiences on FY1s’ subsequent behaviour as near-peer assistantship supervisors themselves. To our knowledge, no studies have explored ways in which FY1s draw from personal experiences during assistantships to adapt their behaviour when the student-supervisor role is reversed.

Research questions:
RQ1: How do FY1s’ aligned/misaligned assistantship experiences influence their behaviours and practice as assistantship supervisors?
RQ2: What challenges do FY1s narrate when supervising final year students during assistantships?
RQ3: Do self-reported levels of anxiety, burnout and PI one-year-on differ between FY1s who experienced aligned/misaligned assistantships?

Methods
This study, due to commence in May 2016, builds on our longitudinal work concerning aligned and misaligned assistantships. FY1s from our existing longitudinal cohort (n=20 aligned, n=20 misaligned) will be invited to participate in a further phase of narrative interviews during the time they supervise final-year students’ assistantship. Additionally, we will conduct a further online questionnaire to assess longitudinally aligned and misaligned cohorts self-reported PI, anxiety and burnout.

References
1. GMC. Tomorrow's Doctors [Available from: http://www.gmc-uk.org/Tomorrow_s_Doctors_to_be_withdrawn_on_01_01_2016.pdf; General Medical Council; 2009]
The purpose of health professional training is often to change practice. Practice is a set of complex behaviours. Therefore, understanding what drives practice can be assisted by understanding what drives behaviour per se. Training is typically developed from educational theories and the outcomes of training assessed by change in knowledge and skills (capability) and sometimes change in practice. Behavioural science tells us that, in addition to knowledge and skills, people require opportunity and motivation to change behaviours.

Educators do focus on concepts other than capability in their education. For example, many continuing professional development (CPD) activities will begin with a clinical case illustrating the need for change. Some activities will involve reflection, in which trainees will be asked to think about barriers to adopting the new practices. These techniques are, however, not systematically described and therefore it is difficult to make comparisons across different types of intervention or to replicate successful courses.

A large body of theory and evidence has arisen from implementation and behavioural science: exploring which techniques can be used to change behaviour. Part of this work, has been to collate the many behaviour change techniques into a taxonomy of 93 techniques in 16 categories (Michie et al, 2013). Learning to code techniques according to the taxonomy is difficult and time consuming and the taxonomy has so far been used as a research tool by behavioural scientists.

We aim to explore whether and how the taxonomy can be made into a feasible tool to code the techniques that educators are using in their training. We will conduct a Delphi study to determine which of the 93 techniques should be included in the tool and we will then pilot the tool and assess its feasibility and reliability in three CPD courses.

If we are successful, the tool will offer new avenues for research and will provide valuable information to educators. The research can compare different behaviour change techniques for their impact on practice. Educators can use the findings to include effective techniques and discard ineffective techniques. This would increase the efficacy and efficiency of training.

New Researcher Award 2016
Distinguishing three unprofessional behaviour profiles of medical students using Latent Class Analysis

M Mak-van der Vossen, W van Mook, J Kors, W van Wieringen, S Peerdeman, G Croiset, R Kusurkar
Marianne Mak-van der Vossen, VUmc School of Medical Sciences, Amsterdam, the Netherlands
m.mak@vumc.nl

Background & purpose
Since unprofessional behaviour of physicians is associated with previous unprofessional behaviour in medical school, identifying medical students’ unprofessional behaviour is critical. Research has noted the difficulty in assessing professional behaviour. Instead of recognizing isolated behaviours it could be more helpful to recognize patterns of behaviours to evaluate students’ unprofessional behaviour.

The authors aimed to identify patterns of the unprofessional behaviours of medical students, and to construct descriptions based on these patterns.

Methods
This study included three subsequent steps: (1) Content analysis of research articles (found in PubMed by using the search terms “unprofessional behaviour” AND “medical student” and synonyms) was used to construct a template of unprofessional behaviours for coding presence and absence of these behaviours in student evaluation forms indicating unsatisfactory professional behaviour, collected during 2012–2014 at VUmc School of Medical Sciences Amsterdam, the Netherlands. (2) Latent Class Analysis (a statistical method to define classes in a database) was used to identify classes of students with a high chance of displaying comparable patterns of unprofessional behaviour. (3) For each class, a profile description was constructed by summarizing teachers’ narrative feedback provided in evaluation forms of 10 students who appeared to be prototypes of their class.

Results
Based on 23 articles a template of 109 behaviours (93 from the literature, 16 iteratively added during coding) was used to code 232 evaluation forms of 194 students (3.9% students/year). Latent Class Analysis identified three classes of students with comparable behavioural patterns: (i) “poor reliability” (43%), (ii) “poor reliability and poor insight” (20%), (iii) “poor reliability, poor insight and poor adaptability” (37%). The distinguishing (latent) factor appeared to be: “capacity for self-reflection and adaptability.” For each class a profile description was drafted, which will be presented at the conference.

Conclusions
This study identified three unprofessional behaviour profiles of medical students that seem to indicate the students’ capacity for self-reflection and adaptability. Earlier research has noted a diminished capacity for self-reflection and adaptability as crucial in medical school, since it tends to continue in residency and medical practice, with undesirable consequences for future patients. Further research is needed to determine the usefulness of the identified profiles for the evaluation of professional behaviour of medical students.

References:
Sir John Ellis
Student Prize 2016
Pre-hospital care is a new, exciting and developing sub-speciality within medicine. It is, however, often underrepresented at an undergraduate level with students having minimal exposure throughout their undergraduate curriculum. Our work has been concentrating on improving the access to, and quality of, pre-hospital care education for undergraduates, qualified doctors and other members of the multidisciplinary healthcare team requiring an introduction to the subject.

An undergraduate pre-hospital care course (UPHCC), offered by the University of Aberdeen in conjunction with NHS Highland was in its pilot year in 2014/15. This course was designed to offer a complete and wide-ranging introduction to pre-hospital care for its students. Our work focussed on improving and solidifying the course curriculum, alongside creating wider resources to provide all students with an introduction to pre-hospital care. These two aims have been achieved through the creation of two manuals, the instructor manual and the student manual.

The UPHCC is split into 9 sessions, each lasting two-to-three hours, consisting of both tutorials and simulated scenarios. For the pilot year there was a basic framework in place, but through the creation of the instructor manual we have developed a comprehensive curriculum focusing on different aspects of pre-hospital care ranging from basic patient assessment to mass casualty scenarios. In this manual we provided a set structure for each session to include; learning objectives, teaching guidelines and the scenarios to be undertaken. This is effectively a step-by-step guide of how to run the UPHCC, providing a consistent structure which means the course could be replicated and run at any institution with enthusiastic volunteers.

Away from the curriculum we found a distinct lack of educational resources to support students looking for a comprehensive and introductory guide into pre-hospital care. To answer this we produced the student manual, a fully referenced and evidence based pre-hospital resource which gives students a guide to the technical and non-technical skills essential to the specialty. As well as this, the manual gives a wider look into the issues around pre-hospital care, the evidence behind practice and what a career in pre-hospital care entails. This aims to provide a valuable reference text and assist in inspiring the next generation of pre-hospital practitioners.

In conclusion, these manuals provide a good foundation for further development of pre-hospital care education in the undergraduate curriculum, as well as increasing awareness of this new specialty to healthcare professionals.
Teaching Innovation & Excellence Award (TIE)
Dr Catriona Hall and Mr Rohan Vithlani (joint nomination), Clinical Teaching Fellows, St Mary’s Hospital, Paddington, London. Dr C Hall is a GP trainee, undertaking OOPE between ST2 and ST3. Mr R Vithlani is an ENT ST3.

**Bleep in the Bag**: a 90-minute seminar and educational game for final-year medical students designed to address preparedness for on-call work. Students are presented with 5 brief, simulated phone calls from nursing staff and asked to prioritise the tasks on their smart phones, using Mentimeter, before and after discussion of the cases.

*Dr Hall and Mr Vithlani have been nominated for a regional (Imperial NHS Trust) Teaching Excellence Award for their work.*

**Dr Gareth Morrison**, ST7 Anaesthetics

**Acute Care Course for Adult Patients**: a one-day critical care course for foundation year 1 (FY1) doctors, designed to teach them the skills they need to manage acutely unwell patients safely. The core curriculum is based on the UK Foundation Programme syllabus. Dr Morrison has also designed a complimentary comprehensive 250-page course guide. Together these cover essential basic science, pathophysiology, practical skills and management based on algorithms using a systematic approach. Participants are subsequently assessed on their competence with a 5-station objective structured clinical examination and a 50-question single best answer examination. Dr Morrison has gathered substantive statistically significant evidence to show improvements in learning.

**Dr Yan Ning Neo**, Academic Foundation Year 2 (Ophthalmology and Medical Education)

**Eyesi**: an innovative trainee-led generic basic microsurgical skills simulation teaching programme using the EyesiTM ophthalmic surgical simulator, targeting learners who are yet to enter specialty training (Pre-Specialty Trainee or Pre-Core Trainee). The course aims to familiarise learners with handling of the simulator and surgical instruments. Its main objective is to improve fine motor skills, and Dr Neo has found the a statistically significant change in assessment scores before and after the course.

*Dr Neo was awarded the regional (Dundee) Faculty of Medical Educators (FaME) Best Junior Doctor Teaching Award 2015/16 for his work.*
What’s Hot in Learning & Teaching Innovations in Medical Education
**What’s Hot in Learning & Teaching Innovations in Medical Education**  
**Thursday 7th July 2016, 2.20pm – 3.20pm**  

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Details</th>
</tr>
</thead>
</table>
| 2.20  | **Welcome**                                                                   | Dr Clive Gibson (EDG Group lead)  
Introducing TEL group leads Alison Bullock and Jane Williams, and Psychometrics group lead Richard Fuller |
| 2.25-2.50 | **Educator Innovator Award Winners 2016**                                     | (2 x 10 minutes each)  
**Interactive high fidelity patient simulations delivered to large group pre-clinical medical cohorts in the lecture theatre**  
*Clare Guilding, School of Medical Education, Newcastle University Medical School*  
**A novel teaching ophthalmoscope: The impact on learning and assessment of fundoscopy and the implications for understanding the modalities of feedback**  
*Christopher Schultz, Royal Bournemouth Hospital, Bournemouth, UK*  
**Q & A Session** |
| 2.50-3.15 | **Abstract presentations from What's Hot submissions**                         | (2 x 10 minutes each)  
**Validity of Situational Judgement Tests: Are they effective tools to assess professionalism?**  
*Peter Whitfield, Plymouth University Peninsula Schools of Medicine and Dentistry; National Recruitment lead for Neurosurgery, Plymouth Hospitals NHS Trust Plymouth PL6 8DH*  
**'I'm a medical educator, get me out of here!' Exploring the tensions**  
*A Sethi, S J Schofield, R Ajjawi, S McAleer, Centre for Medical Education, University of Dundee*  
**Q & A session**  
**Session Chair Dr Mark Lillicrap** |
| 3.15  | **Summary and close**                                                         | Dr Clive Gibson |

196
Educator Innovator Award Winners 2016
EDG Educator Innovator 2016 Award: Interactive high-fidelity patient simulations delivered to large group pre-clinical cohorts in the lecture theatre

Abstract:
Combining interactive voting technology and high-fidelity patient simulations in the lecture theatre for large group pre-clinical medical cohorts

C Gulding
C Gulding, School of Medical Education, Newcastle University Medical School, Newcastle, UK

A major challenge faced by undergraduate medical students is application and integration of their basic science knowledge into clinical practice. Such integration forms a crucial component in the effective evaluation and management of patients. However medical schools often struggle to provide sufficient early clinical experience to facilitate this process, particularly in the first, predominantly pre-clinical, years. I lead the Clinical Pharmacology, Therapeutics and Prescribing strand of the MB BS degree programme at Newcastle University, with class sizes ranging from ~220 students in first two pre-clinical years, to ~350 students in the clinical years. In the 2014-15 academic year I introduced a high-fidelity patient simulator, SimMan, into year 1 and 2 pharmacology lectures to provide interactive and engaging learning opportunities in which pre-clinical medical students could apply their scientific knowledge to clinical scenarios.

SimMan is a sophisticated artificial dummy who breathes, has heart beats, bleeds, blinks, responds to drugs etc. He can be programmed to display a wide range of physiological and pathophysiological signs and responds appropriately to treatment, be it physical e.g. cardiopulmonary resuscitation or therapeutic e.g. administration of oxygen. This provides the students with a unique opportunity to apply learned principles in a safe, controlled learning environment and offers instantaneous feedback on their actions. I created a range of interactive simulated medical emergencies (e.g. anaphylaxis, acute asthma attack) for delivery in the lecture theatre. All scenarios run for approximately 15 minutes within traditional 1 hour lecture slots. To enable the entire class to engage in clinical decision-making, split-screen and interactive voting technologies are employed. One of the screens projects the physiological readouts from SimMan such as his blood pressure, ECG heart trace and oxygen saturation; the other screen is linked to a TurningPoint interactive quiz. Each student is supplied with a TurningPoint handset and at a series of key clinical points throughout the scenario the students are asked to vote individually and anonymously on the most appropriate course of action (e.g. initial patient management steps, which drug should be administered). The option with the most votes, (whether or not this is the correct management option) is applied to SimMan and the students then observe the physiological effects this has in real time. Feedback from this innovation has been extremely positive, and indicates that engagement of students from the very first years of their medical education with realistic clinical scenarios contextualises the importance of basic science principles for medical practice.

References
EDG Educator Innovator 2016 Award: A novel teaching ophthalmoscope: The impact on learning and assessment of fundoscopy and the implications for understanding the modalities of feedback.

Abstract:
The impact of a novel teaching ophthalmoscope on learning and assessment and the implications for understanding the modalities of feedback.

C Schulz
C Schulz, Royal Bournemouth Hospital, Bournemouth, UK

Fundoscopy is an essential component of the physical exam, and can be used to detect both life- and sight-threatening disease. Despite this, there are multiple reports that medical students, junior doctors and GPs lack confidence in fundoscopy and avoid the ophthalmoscope when clinically indicated.

An innovative ‘teaching ophthalmoscope’ has been developed with the aim of improving the effectiveness of teaching and assessing fundoscopy. This device is a modified version of a traditional handheld direct ophthalmoscope that projects a live feed of the user’s view to a nearby computer screen where it may be simultaneously observed by a third person.

A recent trial evaluated the impact of this device as an aid to learning and assessment. Fifty-five medical students were randomised to be taught either with a conventional direct ophthalmoscope (control) or the teaching device (intervention). Following this teaching session, all students rated their confidence using a direct ophthalmoscope on a scale of 1 (‘not at all’) to 10 (‘extremely’). All participants subsequently completed two objective structured clinical examination (OSCE) stations: the first with the conventional ophthalmoscope and the second with the teaching device. Both OSCE stations were marked by two independent masked examiners, using a validated system scored between 0 and 24.

When compared with the control group, the intervention group demonstrated significant improvements in both student-reported confidence (7.3 vs 4.9; p<0.001) and in OSCE scores of competence (19.8 vs 17.6; p=0.01). Within an OSCE setting, independent examiner scores showed significantly improved inter-observer reliability when using the teaching device, compared with the conventional ophthalmoscope (r=0.90 vs 0.67; p<0.001).

During this study, certain themes emerged that offered validity to an operational definition of feedback. Firstly, a live demonstration using the teaching ophthalmoscope provided an unambiguous and well-defined standard to which all parties could refer to. Secondly, the teaching ophthalmoscope provided greater information about the student’s performance to the tutor. This initial ‘information gathering’ step is the foundation on which the feedback process is based.

The described innovation demonstrates an evidence-based method for improving the competence and confidence of medical students in fundoscopy. It also provides a more reliable method for assessment as part of an OSCE. Furthermore, the evaluation of this device in practice has provided evidence for the validity a generalisable model of feedback. By targeting specific modalities including the setting of clear observable standards, and the gathering of directly observable information, measurable improvements in learning can be made.
Validity of Situational Judgement Tests: are they effective tools to assess professionalism?

P Whitfield
P Whitfield Professionalism Lead, Plymouth University Peninsula Schools of Medicine and Dentistry; National Recruitment Lead for Neurosurgery. Plymouth Hospitals NHS Trust, Plymouth PL6 8DH.

Background and Purpose
Situational Judgement Tests have been used to evaluate non-cognitive constructs during selection within medicine. The major areas of utility comprise selection to medical school, the UK Foundation Programme and general practice. The purpose of this study was to review recent evidence concerning the validity of SJT use in medicine, specifically evaluating whether an SJT can be used to assess professionalism skills and behaviour.

Methods
A literature search of biomedical, educational and psychological databases was conducted using the search terms “situational judgement test” OR “situational judgment test” AND “medical”. 122 papers were then reviewed for content: 19 of these provided data on SJT use within medicine. 17 papers reported cohorts where SJTs were used as a selection tool. 2 papers used SJTs as a formative assessment tool during a teaching programme. Data was extracted from the papers and reviewed, adopting a professionalism perspective, using the American Psychological Association (APA) framework and Beckman’s grading of quality of evidence (Downing, 2003; Beckman et al., 2005).

Results
Some of the studies provided detailed evidence of blueprinting to a “job or student performance analysis” process. The use of subject matter experts was widespread, although detail concerning the overall content of assessment in relation to professionalism was low.

Papers evaluated differences between “knowledge” and “behavioural” instructions and different types of response formats. Response formats designed to minimise threats from coaching and faking were described.

In general, test reliability was well supported although the level of Cronbach’s $\alpha$ was sometimes sub-optimal (range from 0.42 to 0.88). Low levels of internal consistency probably reflect the multi-dimensional construct of professionalism. Strong correlations with assessment centre performance, and in two cases subsequent work performance, provide evidence that SJTs are predictive of behaviour.

Discussion and Conclusions
Evidence supports the hypothesis that SJTs can evaluate professionalism. However, there are many steps that require attention in the development and conduct of an SJT. Content validity is of prime importance and requires mapping of the assessment to a blueprint.


‘I’m a medical educator, get me out of here’: Exploring the tensions

A Sethi, S J Schofield, R Ajjawi, S McAleer
SJ Schofield, Centre for Medical Education, University of Dundee, Mackenzie Building, Kirsty Semple Way, Dundee, DD2 4BF

Background and Purpose
The growing expectations of regulatory bodies and increased accountability has led to the professionalisation of medical education\(^1,2\). Previous studies have attempted to identify tensions medical faculty may encounter as medical educators. Zibrowski et al.\(^3\) identified time-related tensions, and Hu et al.\(^3\) looked at tension encountered in Australasian medical schools, but not specifically those with a qualification in medical education. This current study explores in detail, the complex and multifaceted tensions of healthcare educators with qualifications in medical education at various stages in their career from academic centres worldwide.

Methodology
Firstly the experiences of a diverse pool of purposively sampled (14 UK & 13 International) graduates from the Centre for Medical Education, Dundee were explored through semi-structured interviews. Secondly nine face-to-face students (2013/14) were interviewed periodically over 10 months, through the course and to the workplace. Data were analysed using constructivist grounded theory analysis in ATLAS.ti 7.

Results
Participants expressed multiple tensions associated with both becoming and being a healthcare educator. Educational roles had to be juggled with clinical work, challenging their work-life balance. Education was regarded lower than other healthcare career tracks, job descriptions and promotion policies unclear, and appraisals were on the same criteria as clinicians or researchers. Pursuing a career focussed on medical education placed them in a weak financial position in comparison to their clinical colleagues. Medical education was a vast speciality, making it difficult as a generalist to keep up-to-date in all its areas. Interestingly, those with extensive experience in education reported no fears, rather asserting that the qualification gave them job variety.

Discussion and Conclusions
This is the first detailed study exploring the tensions of educators with postgraduate qualifications in medical education. These tensions may lead to detachment, cynicism and a weak sense of identity among those who are active within medical education. It is important to recognise and foster the development of educational identities in view of the multiple roles most of the educators fulfil\(^5\). Despite all these concerns, the graduates continued to invest in education owing to their interest and passion. This is associated with altruistic behaviour, a common trait among those classifying themselves as members of a profession\(^6\). However, society’s acceptance of health professionals with full-time careers in medical education will be critical to their retention and success\(^3\). Also, medical education qualifications should help their students to identify these tensions and develop coping strategies.

References
### Basic Science/ Biomedical Teaching & Assessment

**Paper withdrawn**

<table>
<thead>
<tr>
<th>Poster board number</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>226</td>
<td></td>
</tr>
</tbody>
</table>

- Can the use of eye-tracking determine when novices become experts in facial skin cancer reconstruction?  
  T Walker  
  L Moore  
  G Knepil

- Managing Uncertainty: teaching the requisite communication skills to final year medical students.  
  N Jordan  
  I Heyworth

- Near-peer teaching in Anatomy: the learner’s perspective  
  J Sinclair  
  A Cameron  
  S Parson  
  A Venkatesh

- The effect of a peer instigated and delivered mock examsaiton on the confidence and preparedness of 4th year medical students undertaking the Liverpool Objective Clinical Assessment System (LOCAS Finals Examination)  
  T Goldsmith  
  S Platt

**Clinical Skills**

- 'But I thought it was real?' The effect of high psychological fidelity on skills learnt through a simulation programme  
  S Scholes  
  E Wooding  
  T Guest

- Paper withdrawn

- Ophthalmology teaching: A model to integrate ophthalmology within the core medical curriculum  
  I Jawaid  
  W Amoaku

- OSCE abdomen and respiratory stations are the most difficult: have they been forgotten?  
  K El-Said  
  Dawoud  
  G Burton  
  R Parikh  
  T Lightburn  
  K Beswick

**Communication Skills**

- “Comms Cards” – A novel resource for communication skills teaching in medical students.  
  J Kennedy  
  L Fisher  
  Z Thomson

- Assessing the Impact of a Novel Approach to Referral Skills Teaching for Foundation Doctors  
  E Hampton  
  B Hale  
  D Smith
Difficult decisions: a Qualitative study of Surgeons experiences
A Humphreys
R Bamford
J Coulston

Experiential Communication Skills training for Medical Undergraduates
F Bold
J Hartland
K Jones

Impact of a modified Geriatric Medication Game® on first year pharmacy students' empathy and attitudes toward older adults
S Haughey
S Flynn
R O'Hare

Infographics: Healthcare Communication for the Digital Age
A McCrorie
C Donnelly
K McGlade

Lessons in the use of simulation to train medical students in modern end-of-life care
P Leighton
H Mincher
A Dawson
H Walijee
A Cordey
B Warwick

Situation Background Assessment and Recommendation (SBAR): Undergraduate Perspectives
C Morgan
L Adams
J Murray
R Dunlop
I Walsh

Sociodramatic Fish Bowl role-play in Last Days of Life communication teaching for postgraduate Foundation Year 2 Doctors
J Hartland
C Banks
K Jones

The ‘windows method’ for student consultation skills: GP tutors’ experiences on a new method of giving feedback
A Newth

The use of stakeholder-informed simulation in assessment: sharing experience from an undergraduate medical student disability awareness programme
V Crawford
A Wilson
A Gidwani
C Meneilly
D Bell

CPD

‘Junior doctors as educators’ Should their involvement be more structured, formalised and recognised?
Z Hossenbaccus
P Davies
C Rodd

Design of a bespoke Multi-Source Feedback tool for Clinical Teaching Fellow’s
C Earnshaw
J Hawkins
Z Hossenbaccus
YYS Ho
P Davies
M Sherwood
Z Dawood
C Rodd

Peer Review of Teaching for GP Tutors: A Pilot Project
V Mistry
A O’Brien
‘The demise of firm based learning’ Should certain aspects of this model be revived in the form of a Mentorship Scheme?

Z Hossenbaccus C Rodd C4 254

Development of an undergraduate specialty curriculum: a mixed methods approach

R Steven G Mires S McAleer C5 255

Final Year Medical Students’ and Clinical Educators’ Experiences of a Senior Student Assistantship: A Narrative Interview Study

O Jones C Okeke A Bullock S Wells L Monrouxe C6 256

How well understood is female genital mutilation (FGM) amongst ED staff and do we need to improve awareness?

E Worley C7 257

Introducing Diving Medicine to the Undergraduate Curriculum

J Barr J McDonald T Goddard R Printer K Jones C8 258

Paper withdrawn

C9 259

E-Learning

A systematic evaluation of SCRIPT eLearning: from theory to practice

H Vallance H Brooks S Pontefract N Blackwell J Marriott E Hughes R Ferner J Coleman D1 261

Development of an E-Learning Resource for integration into a blended learning program of undergraduate General Practice teaching

A Faherty D2 262

Evaluation of an E-Learning Resource on Depression developed for use in a Blended Program of Undergraduate Primary Care Teaching

A Faherty D3 264

Innovation and review of the use of the iPad in undergraduate medical education

S Sinha S McRobbie A Meldrum C Brown A Denison D4 266

Medical education in conflict

E Keelam D5 267

Student experience of e-learning activities in a blended pathology curriculum

S Alvi N Carr D6 268

The pocket personal formulary – developing a customised medical app

P Duvall L Cocks J Garner D7 269
What makes good e-learning software? A Medical Student Survey.  
N Walker  
R Bamford  
D8 270

Why a Core Surgical Trainee Collaborative Chose to Develop e-Modules?  
J O’Callaghan  
R Bamford  
I Langdon  
C Rodd  
J Coulston  
D9 271

Faculty Development

Developing a credential in medical education: consultation results  
E Russ  
A Bullock  
E Muddiman  
J Browne  
A Byrne  
K Hawthorne  
J Hayden  
J Cleland  
A Saayman  
D Gallen  
E1 273

Medical students’ expectations and experience of personal tutoring: a qualitative study.  
M Webb  
S Smithson  
E2 274

The motivations and experiences of dental clinical teachers attending teacher-training programmes  
S Aljohani  
E3 275

International Medical Education

Audit of academic poster design at the ASME Annual Scientific Meeting 2015  
M Redman  
A Gopal  
D Cox  
D Foreman  
E Elsey  
S Fleming  
E4 277

Developing an Undergraduate SSC in Global Health in Uganda: 3 years on  
A Hawkins  
D Majumdar  
J Moffat  
K Else  
M Natarajan  
K Jones  
E5 278

Inter-professional Education

A Pilot Approach Using the Dissection Room in Operating Practitioner Department Student Gastrointestinal Anatomy Teaching  
S Vitello  
A Bonfield  
V Chillal  
S Richter  
A Gulley  
E6 280

Great minds, but do we all really think alike?  
YYS Ho  
D Morton  
H Chant  
N Oxlade  
L Crossland  
C Earnshaw  
Z Hossenbaccus  
P Fletcher  
P Bianchi  
C Rodd  
E7 281
Passing the PSA: An emerging role for pharmacists in medical education?  
L Cocks  

Post-graduate Nephrology Nursing Simulation Training  
K Gulati  
M Antonelou  
C Hill  
A O’Riordan  
B Fernando  

Profession Specific Learning Objectives within Inter-professional Education (IPE) Improves Multi-Disciplinary Team (MDT) Perceptions and Collaborative Team Work  
C Ratneswaran  
D Vamathevan  
J Mushtaq  
T Khong  

Signing up to safety: Use of multi-disciplinary ward-based simulation to enable healthcare students to learn about patient safety  
I Taylor  
J Hollamby  
E Berragan  
J Morgan  

The UCL Pre-Hospital Care Programme – Novel education for the modern training Doctor  
S Bulford  
M Clear-Hill  

Using flow charts to understand diagnosis and management in an acute presentation with multi-organ involvement  
S Herbert  
P Boddana  

Patient Voice  

Educating our Patient Volunteers – The Development of an Information Afternoon for Volunteer Patients.  
C Sharratt  

Parent opinion on Multi-disciplinary In-situ Simulation as Paediatric Emergencies Training  
C Hart  
C Junk  
T Bourke  
A Thompson  

Patient Perceptions of Medical Students in Gynaecology Clinics  
A Tyler  
F Hodge  
E Kevelighan  
J Gasson  

Postgraduate Education  

"Mainstreaming Gender into Research" means Gender Medicine in the Medical Education  
M Hochleitner  
H Siller  
A Bader  

A Case controlled study to evaluate the effect of an enhanced induction day on the preparedness of Foundation Year 2 doctors starting their O&G attachment.  
S Zaheer  
E Metcalf  
P Kinnersley  

A Self-Assessment Skills Workshop for Foundation Trainees  
A Wilson  
P Baker  

ADEPT - the inaugural journey of the clinical leadership fellows  
R Hutton  
J Courtney  
G Donaghy  
L McLaughlin  
J Reid  
N Thompson  
L Meghey  
G Lewis  
L Damkat-Thomas  
K Gardiner  


An Exploration of Foundation Year Doctors’ Experiences in the Care of the Dying

S Gajebasia
J Pearce
M Redman
M Johnson
G Finn

Applying academic expertise to practical problems in general practice training – outcomes from the Australian General Practice Training programme’s Education Research Grants

S Wearne
L Stone
N Pollock
J Anastasiou
J See

Are there unmet educational needs amongst foundation doctors in Lothian? Three different perspectives.

S Shad
D Harrison
K Adamson

Assessing Quality of Educational Supervisor Reports

M Patel
P Baker

Barriers To Providing Effective Feedback - A survey of Consultant’s in the West Midlands.

H Stevenson
N Qureshi
S More

Being the change you want to see in your training. Using Trainee Feedback to Improve Surgical Induction

S Williams
R Bamford
C Rolwands
P Orchard
P Boorman
R Longman
J Coulston

Chronic renal patients: why are we frightened?

S Grieve
H Blakey

Confidence levels of Foundation Doctors with teaching: The need for formal teacher training support

S Vitello
P Dilworth

Developing a different kind of doctor? Findings from a study of a Broad-Based Training programme

K Webb
A Bullock
L Allery
J MacDonald
E Muddiman
L Pugsley

Developing Excellent Leaders- The Role of Executive Coaching for GP Specialty Trainees

S Harte
K McGlade

Does oncoplastic cross-speciality training have an impact on the professional identity development of breast surgical trainees?

T Gandamihardja
R Di Napoli

Does the implementation of a teaching programme to foundation doctors improve their clinical teaching: The DUCT Programme?

R Gray
S Dolan


G Pickering
P Dacombe
R Bamford
M Acharya
M Crowther
S Eastaugh-Waring
J Coulston
Establishing an innovative Trust based training programme

K Wright
A Williamson
J Hanley
M Ragbir

Fact or fiction? Realising the learning value of workplace-based assessment

A Barrett
R Galvin
A Scherpber
P Teunissen
A
O'Shaughnessy
M Horgan

Factors influencing Medical Career Decisions and Advancement amongst Trainees in Northern Ireland

R Hutton

Hospitalist Physician Associates Help Bridge the Duty Hours Gap in US Teaching Hospitals

R Rienzo
A Garino

Human Factors Training is a Valued and Effective for Surgical Trainees

R Bamford
H Burnand
R Longman
M Acharya
J Coulston

Improving patient confidence in surgical care through training requirements- do numbers of indexed procedures matter?

K Booth
R Jeganathan
M Boohan

Is trainee experience of medical education influencing intent to practise in Ireland?

P Kavanagh
S O’Hare

It’s For You-hooo... Simulation training increases confidence in telephone skills in core surgical trainees

Z Oliphant
CD Rodd
I Langdon
J Coulston
R Bamford

Junior Doctors: Is it all about the money? What is the cost of training?

E Darvill
L Steele
M Holdway
P Fletcher

Laparoscopy training at Home – encouraging early results to improve technical skills in Core Surgical Trainees

R Bamford
C Rodd
I Langdon
S Eastaugh-Waring
J Coulston

Mentoring in Emergency Medicine

N Moultrie
C McKiernan

Multi-disciplinary fully immersive simulation as a means of teaching junior medical and nursing staff about “never-events”.

J Taylor
S Mercer

Non-Technical Skills Simulation-Based Education in Urology: Challenges in Implementation

P Ravindra
N Woodier
D Bodiwala
H Ratan

Out-of-hours paediatric in-situ simulation: a quality improvement and educational tool

C Hart
T Bourke
A Thompson

209
Pilot study of an enhanced induction day to increase year 2 foundation doctor's preparedness for starting their O&G placement.

S Zaher
E Metcalf
P Kinnersley

J8 324

Providing Teacher Training for Junior Doctors that Volunteer to Teach Medical Students

S Vitello
A Sundaram

J9 325

Simulation and roleplay training for core surgical trainees: handover and managing the emergency take

Z Oliphant
E Tudor
E Upchurch
R Bamford
C Rodd

J10 326

Simulation ward rounds facilitate human factors training in core surgical trainees

Z Oliphant
C Rodd
I Langdon
J Coulston
R Bamford

K1 327

Sub-Specialty Emergency Surgery Training for Core Surgical Trainees

J Lim
R Bamford
C Rodd
I Langdon
J Coulston

K2 328

The challenges of organising a cadaveric training day.

P Orchard
R Bamford
C Rowlands
S Williams
R Longman
P Boormand
J Coulston

K3 329

The Dog Ate my Homework! Why Don't Trainees Engage with Training in Their Own Time?

R Bamford
C Rodd
I Langdon
S Eastaugh-Waring
J Coulston

K4 330

The use of Virtual Patients in assessment of Postgraduate General Surgical Trainees – A Pancreatic Cancer model

N Walker
R Bamford
P Duncan
K Butcher
D Alder

K5 331

Transition to Clinical Practice: a longitudinal study of the first year as a doctor.

N Coakley
P O'Leary
M Horgan
D Bennett

K6 332

Understanding more about sources of trainee bullying

P Kavanagh
S O'Hare

K7 333

Ward rounds: When Foundation Year 1 doctors take the lead.

M Redman
S Gajebasia
J Pearce
I McNeil

K8 334
Practice Based Teaching and Learning

Are Dental Graduates Prepared for Patients Questions about HPV? S Hall  
C Fleming  
T Walker  
C Earnshaw  
N Oxlade  
Z Hossenbaccus  
J Hawkins  
YYS Ho  
P Fletcher  
C Rodd

'Are they really ready for professional practice?' The use of in-situ simulation in preparing Tomorrow's Doctors  
C Earnshaw  
N Oxlade  
Z Hossenbaccus  
J Hawkins  
YYS Ho  
P Fletcher  
C Rodd

Gynaecology Teaching Associates (GTAs): Do they make a difference? A Tyler  
F Hodge  
E Kevelighan

Handover Whispers – A Novel Approach to Handover Teaching M Freeman  
E Hampton  
D Smith  
B Hale

Paper withdrawn

Professionalism

“Lights, Camera and…. Education!” Professionalism for 3rd year medical students – can cinemeducation change this from a chore to a more effective learning experience? Z Hossenbaccus  
H Chant  
C Earnshaw  
J Hawkins  
YYS Ho  
P Davies  
C Rodd

Identification of the medical student in the clinical setting R Rooney  
J Schofield  
R Chisman  
J Morgan

Using a pre-arrival task to encourage first year students’ engagement with professionalism: Its feasibility and impact L Cairns  
S Lynch  
A Timm

Using Clinical Debrief sessions to promote Professional Identity Formation R Farrington  
D Walters

Psychometrics

Development, standard-setting and validation of checklist-based assessment of simulated intercostal drain performance E Hampton  
J Tiernan  
S Edgar

Selection

“It is not the easy option people think it is.” Improving the experience of healthcare students living in the family home whilst studying S Calvert  
D Burns  
S Speed  
P Fisher
Can performance in multiple mini-interviews and situational judgement tests predict first year performance in medical school?  
J Shaw  
R Mackenzie  
J Cleland  
A Husbands

Dare to Doctor: Four years of an access to medicine summer school in Swindon.  
R Holman  
A Woodman  
H Luckhurst  
F Bold  
K Jones

Encouraging wider participation in medical education: Listening to school students  
N Wyatt  
B Beska  
G Wood  
A Martin  
A Codd  
G Vance  
B Burford

Engagement, Resilience and Independence in Junior Medical Students  
A Jack  
B Coull

From medical student to widening participation fellow – views of a widening participation teaching role.  
J Azmy

<table>
<thead>
<tr>
<th>Teaching About Specific Subjects</th>
</tr>
</thead>
</table>

Can a 13-minute video on Human Factors increase the effectiveness of Simulation Training for Trainees?  
I Pankhania  
C Hogan  
P Walker  
E Smithers  
C Curtin

First Year Specialist Trainees Value Cadaveric Surgical Training  
R Bamford  
P Orchard  
C Rowlands  
S Williams  
P Boorman  
R Longman  
J Coulston

From diagnosis to death – Multidisciplinary palliative care simulation for medical and nursing students  
J Hartland  
F Bold  
K Jones

Healthcare Professionals Learning Intravenous Fluid Therapy: A Scoping Literature Review  
R McCrory  
G Gormley  
P Maxwell  
T Dornan

How do foundation doctors feel about performing pre-operative assessment?  
S Channing  
V Medland  
K Manley

Medical students’ perceptions of and engagement with the Bio-Psycho-Social Model  
T Ludhra  
K Kendall  
S Omer

Preparing students for deaths and dying: are we getting it right?  
V Crawford  
M Toner  
B Cox  
M Stevenson  
D Bell
<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>STICK IT! - Sharp students?</td>
<td>A Cordey, A Martin</td>
<td>N2</td>
</tr>
<tr>
<td>The Swiss Cheese board game: introducing students to medical errors</td>
<td>YYS Ho, C Earnshaw, Z Hossenbaccus, J Hawkins, CD Rodd</td>
<td>N3</td>
</tr>
<tr>
<td>Variable knowledge, education and confidence amongst non-specialist</td>
<td>I Lawrie, SK Walker</td>
<td>N4</td>
</tr>
<tr>
<td>doctors delivering palliative care (PC) services: is there a link</td>
<td></td>
<td></td>
</tr>
<tr>
<td>between undergraduate teaching and clinical practice and how might</td>
<td></td>
<td></td>
</tr>
<tr>
<td>deficits be addressed?</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Teaching, Learning &amp; Assessment On Clinical Rotations</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>“FY1 Oncall Survival Kit” Does use of mixed media in case based</td>
<td>E Southgate, J Ehsanullah, S Singh</td>
<td>N5</td>
</tr>
<tr>
<td>tutorials improve student preparedness for Foundation Year 1 tasks?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experience of implementing a surgical teaching programme to final</td>
<td>J Hubbard, T Pepper, J Ehsanullah, E Southgate, S Singh</td>
<td>N6</td>
</tr>
<tr>
<td>year medical students</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gynaecology Teaching Associates (GTAs): Are they working?</td>
<td>A Tyler, F Hodge, E Kevelighan</td>
<td>N7</td>
</tr>
<tr>
<td>Improving surgical education in theatre: a pilot study in ENT at St</td>
<td>R Vithlani, M Rollin</td>
<td>N8</td>
</tr>
<tr>
<td>Mary’s Hospital</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical student identification: continuing to remove anonymity</td>
<td>N Botting, S Wallis, J Fawcett, H Burton, S Hall, J Sansom</td>
<td>N9</td>
</tr>
<tr>
<td>Opportunities to clerk inpatients in a large teaching hospital: A</td>
<td>J Hollamby, J Morgan</td>
<td>N10</td>
</tr>
<tr>
<td>growing problem for medical students?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orientating Medical Students at the start of the Clinical Phase to</td>
<td>S Tilson, J Offer</td>
<td>P1</td>
</tr>
<tr>
<td>Wards: A Novel Focus for a Simulated Ward Round.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient consent to medical students in primary care: a pilot study</td>
<td>M Webb, H Clifford, R McKinley</td>
<td>P2</td>
</tr>
<tr>
<td>Qualitative study of the impact of medical undergraduate authentic</td>
<td>H Nolan, A Sturrock</td>
<td>P4</td>
</tr>
<tr>
<td>electronic portfolio use on preparedness for practice in Foundation Year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Title</td>
<td>Authors</td>
<td>Page</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>----------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Student Run Simulation</td>
<td>J Barr, C Banks, J Moffatt, K Else, T Goddard</td>
<td>P5 377</td>
</tr>
<tr>
<td>The clerking portfolio: an exploration of student, doctor and patient perspectives</td>
<td>J Hollamby, J Morgan</td>
<td>P6 378</td>
</tr>
<tr>
<td>The Obstetrics &amp; Gynaecology Teacing Registrar: The Changing face of Obstetrics &amp; Gynaecology Medical Education</td>
<td>A Tyler, F Hodge, E Kevelighan, J Gasson</td>
<td>P7 379</td>
</tr>
<tr>
<td>Paper withdrawn</td>
<td></td>
<td>380</td>
</tr>
</tbody>
</table>

**Technology Enhanced Learning**

<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>'BCDE SOS’ – A Webinar Based Teaching Programme For Final Year Medical Students</td>
<td>JM Kennedy</td>
<td>Q1 382</td>
</tr>
<tr>
<td>'Consulting the CaseBank': a retrospective study on the impact of role-play cases on undergraduate medical student revision</td>
<td>L Jones, J Guckian, T Johnson, D Eastwood</td>
<td>Q2 383</td>
</tr>
<tr>
<td>A blend of two worlds: Geeks and Doctors creating a bespoke Clinical Teaching Fellow e-portfolio</td>
<td>ZA Dawood, M Sherwood, Z Hossenbaccus, J Hawkins, C Earmshaw, YYS ho, CD Rodd</td>
<td>Q3 384</td>
</tr>
<tr>
<td>A novel cardiology advanced simulation training (cast) course</td>
<td>MS NAzir, YR Tow, S Daly, Z Astroulikis</td>
<td>Q4 386</td>
</tr>
<tr>
<td>A simulated eye clinic and a virtual ophthalmic case: alternative worlds.</td>
<td>M Williams, C Ross, S Derbyshire, J Murray</td>
<td>Q5 388</td>
</tr>
<tr>
<td>A Virtual Reality Experience for Ophthalmology Fundus Teaching</td>
<td>A SUndaram, N Murch, R Collins, S Vitello, S Jain</td>
<td>Q6 389</td>
</tr>
<tr>
<td>Analysing tracking data to understand doctors’ use of a smartphone app</td>
<td>A Brookwick, K Webb, AD Bullock</td>
<td>Q7 390</td>
</tr>
<tr>
<td>Bespoke Radiology e-Learning</td>
<td>TB Lynch, JM Murray, IK Walsh</td>
<td>Q8 391</td>
</tr>
<tr>
<td>Title</td>
<td>Authors</td>
<td>Reference</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>----------------------------------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>Blending the old with the new: “see one, do one” A randomised controlled trial into the use of a first person perspective video prior to a simulation scenario.</td>
<td>J Fukuta, J Hollamby, M Hollifield, F Tasker, I Taylor, J Morgan</td>
<td>Q9 392</td>
</tr>
<tr>
<td>Paper withdrawn</td>
<td></td>
<td>393</td>
</tr>
<tr>
<td>Comprehensive framework to support and assess surgical training progress</td>
<td>S Isreb, J Illing, J McLachlan, H Hesselgreaves, SE Attwood</td>
<td>R1 394</td>
</tr>
<tr>
<td>Depends on your perspective: A randomised controlled trial comparing first person and third person perspective videos for clinical teaching.</td>
<td>J Fukuta, J Hollamby, J Morgan</td>
<td>R2 395</td>
</tr>
<tr>
<td>Design and evaluation of a video on how to examine the cardiovascular system</td>
<td>R Rabintharan, A Elamass, MS Nazir, YR Tow, S Daly, R Ray</td>
<td>R3 396</td>
</tr>
<tr>
<td>De-stressing the stressful simulation</td>
<td>C Banks, J Barr, T Goddard, D Majumdar</td>
<td>R4 398</td>
</tr>
<tr>
<td>Developing a teaching video demonstrating the clinical examination of the vestibular system</td>
<td>L Geller, JA McDonald, A Waddell</td>
<td>R5 399</td>
</tr>
<tr>
<td>Does interactive technology have a place in the classroom?</td>
<td>J Whitten, D Colliver, L Wells, V Rodrigues, E Player</td>
<td>R6 400</td>
</tr>
<tr>
<td>Does social learning increase engagement in online courses for healthcare professionals?</td>
<td>M Williams, M Corrigan</td>
<td>R7 401</td>
</tr>
<tr>
<td>Exploring medical students’ use of social media and other websites.</td>
<td></td>
<td>R8 402</td>
</tr>
<tr>
<td>How are clinical photographs currently used for the purposes of teaching and learning by tutors and students in medical schools within England? Can this knowledge be used to develop the content of a medical image library to make it more relevant to teaching and learning in medical schools within England?</td>
<td>C Dakin, E Coates</td>
<td>R9 403</td>
</tr>
<tr>
<td>Improving Medical Student Genitourinary Medicine Experience (IM GaME)</td>
<td>J Morgan, K Nettelton, S Unter, C Morgan, J Cassell</td>
<td>R10 404</td>
</tr>
<tr>
<td>Innovation in medical school: Should we be teaching our students to code?</td>
<td>C Morton, T Lwin, M George, M Williams</td>
<td>S1 405</td>
</tr>
<tr>
<td>Title</td>
<td>Authors</td>
<td>Page</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Inter-professional Non-technical, Clinical and Assessment Skills in</td>
<td>A Colhoun, J Swift, R Griffiths, T Shaw</td>
<td>S2</td>
</tr>
<tr>
<td>Emergencies (INCASE): A multidisciplinary approach to high-fidelity</td>
<td></td>
<td>406</td>
</tr>
<tr>
<td>simulated human factors training</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is a half-day peer-to-peer teaching course an effective method of</td>
<td>M Geogre, S Hogan, L Dormandy</td>
<td>S3</td>
</tr>
<tr>
<td>increasing awareness and use of eLearning resources amongst teaching</td>
<td></td>
<td>407</td>
</tr>
<tr>
<td>fellows?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nav-e-gating toward a new future</td>
<td>J Whitton, A Fecowycz, D Colliver</td>
<td>S4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>408</td>
</tr>
<tr>
<td>No money, no time! Is e-Learning the future of post graduate surgical</td>
<td>D Hughes, R Bamford, I Langdon, CD Rodd, J Coulston</td>
<td>S5</td>
</tr>
<tr>
<td>education?</td>
<td></td>
<td>409</td>
</tr>
<tr>
<td>OnTake.co.uk - A novel, interactive, case-based e-learning resource</td>
<td>A Davies, H Burton, J Tay, N Botting, S Hall, J Sansom</td>
<td>S6</td>
</tr>
<tr>
<td>to maximise students’ preparation for the Foundation Programme</td>
<td></td>
<td>410</td>
</tr>
<tr>
<td>Paramedic and medical student simulation: The importance of</td>
<td>A Woodman, KA Else, JA McDonald, JE Hambidge</td>
<td>S7</td>
</tr>
<tr>
<td>documentation</td>
<td></td>
<td>411</td>
</tr>
<tr>
<td>Personalised recall app for enhancing medical knowledge retention:</td>
<td>A Cripps, R Hart, J Edwards, D Zahra, A Chatterjee</td>
<td>S8</td>
</tr>
<tr>
<td>A pilot study</td>
<td></td>
<td>412</td>
</tr>
<tr>
<td>Pilot of the JASME Simulation Toolkit: Teaching students to educate</td>
<td>A Gopal, M Redman, D Cox, K Merrick, O Farooq</td>
<td>S9</td>
</tr>
<tr>
<td>using Simulation-based Medical Education.</td>
<td></td>
<td>413</td>
</tr>
<tr>
<td>Piloting a novel e-learning laparoscopic surgery module for junior</td>
<td>D Hughes, R Bamford, L Langdon, CD Rodd, J Coulston</td>
<td>S1</td>
</tr>
<tr>
<td>surgeons</td>
<td></td>
<td>414</td>
</tr>
<tr>
<td>PodLearn – E-learning Platform for Medical Students and Junior Doctors</td>
<td>M Khan, J Ouyang, H O’Sullivan</td>
<td>T1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>415</td>
</tr>
<tr>
<td>Simulation as an undergraduate teaching tool for child protection</td>
<td>A Woodman, R Holman, J Hambidge, A Brooks-Moizier, P Nguyen, K Jones</td>
<td>T2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>416</td>
</tr>
<tr>
<td>SonoSim Ultrasound Simulator: An Innovative Educational Tool For The</td>
<td>A Raja, N Murch</td>
<td>T3</td>
</tr>
<tr>
<td>Modern Clinician</td>
<td></td>
<td>417</td>
</tr>
<tr>
<td>Title</td>
<td>Authors</td>
<td>Session Code</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>----------------------------------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>Swindon Safeguarding Simulation</td>
<td>A Woodman, R Holman, J Smith, J King, M Nararajan</td>
<td>T4 418</td>
</tr>
<tr>
<td>Swindon Simulation Saturdays: An additional tool to learning</td>
<td>A Woodman, R Holman, J Barr, M Natarajan, K Jones</td>
<td>T5 419</td>
</tr>
<tr>
<td>Tent pegs: online theory based education for midwives about lifestyle behaviour change talk</td>
<td>J Hart, A Chisholm, C Furber, R Cutforth, S Aspinall, C Lucas, E Rnswick, K Mann, S Peters</td>
<td>T6 420</td>
</tr>
<tr>
<td>The creation of a bespoke clinical teaching fellow e-portfolio – a pilot study</td>
<td>Z Hossenbacus, YYS Ho, J Hawkins, C Earnshaw, M Sherwood, P Davies, ZA Dawood, CD Rodd</td>
<td>T7 421</td>
</tr>
<tr>
<td>Cognitive errors that influence clinical diagnostic decision-making among medical students completing virtual patient cases</td>
<td>D Faraj, R Norman, RS Patel</td>
<td>T8 423</td>
</tr>
<tr>
<td>Using simulation to compare actual and perceived paramedic handover content in high pressure situations</td>
<td>KA Else, A Woodman, JE Hambridge, JA McDonald, M Natarajan</td>
<td>T9 424</td>
</tr>
<tr>
<td>Using technology to create a yardstick for student evaluation of the future</td>
<td>J Whitton, D Colliver, L Wells</td>
<td>T10 425</td>
</tr>
</tbody>
</table>

**Undergraduate Medical Education – Assessment**

Paper withdrawn

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<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
<th>Session Code</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early Warning Score? Can participation in regular computerised formative assessment identify those at risk of poor summative assessment outcomes</td>
<td>R Jay, M Hamilton, C Ling, D Kitchuk</td>
<td>U2 428</td>
<td></td>
</tr>
<tr>
<td>Paper withdrawn</td>
<td></td>
<td></td>
<td>429</td>
</tr>
</tbody>
</table>
The clerking portfolio as an educational tool: the students’ perspective
J Hollamby
J Morgan

The Impact of Weighting of Practical Assessment on Preparedness for Practice
MJ Platt

Timed SCIM’s improve student confidence, approach and performance in final clinical exams
A Draycott
N Downer
D Kelsey
J Patterson
H Boyce

Why do students attend mock exams?
J Ehsanullah
E Southgate
S Singh

Undergraduate Medical Education - Teaching & Learning

‘Step into theatre’: Evaluating medical student transition into the surgical environment
S Hall
N Botting
H Burton
J Fawcet
J Sansom

A mentor scheme for final year medical students
K Else
J Barr
A Stanton
K Jones

A multi-centre survey exploring medical students’ experiences of extracurricular academic research
R Lobo
T Rawson
G Mahir
A Rossiter
P Sivakumaran
D Gill

A novel interactive game for effective undergraduate teaching of medical abbreviations.
F Rashed
C Barr

A Prospective Study comparing teaching of pelvic examination by Clinical Teaching Associates (CTA) with Traditional Methods and a survey of CTA use in UK medical schools.
J Moffatt
S Canning
H Claireaux
K Jones

An educational initiative to improve medical student communication skills: the IMPArT method (IMmediate Personalised feedback with peer-AssessmentT)
D Holmes
M Hunter
J McGoran

Author your own OSCE-a novel approach to remedial support
P Watson
K Cullen

Developing the Leicester LINK Initiative: Helping the Next Generation of Medical Researchers#8239;Learn Academic and Research Skills
G Yan
S Venturini
B Sheth
A Riding

Do final year undergraduate medical students complete pre-reading for tutorials?
A Tomsett
R Gayner
N Adams
E King
R Adhikary
D Mann
N Jakeman
Do Multidisciplinary Human Factors and Incident Investigation Workshops Improve Attitudes and Understanding towards Patient Safety and Communication amongst Undergraduates?

D Majumdar
L Whatley
N Henderson
A Marshall
J Barr
J Hartland
J Hambridge
R Holman
Jo Moffatt

Do third year undergraduate medical students complete pre-reading prior to tutorials

R Gayner
A Tomsett
E King
N Adams
D Mann
R Adhikary
N Jakeman

Does blended learning improve students’ ability to engage with old age psychiatry topics?

J Mjojo
T McGowan
A Blundell
G Pinner
B Ganesan

Domestic Violence – The Case For Incorporating Teaching into the National Obstetrics and Gynaecology Curriculum

J Moffatt
K Else
C Cox-George
K Jones

Educating the educators of the future – Analysis of a 10 week medical student selected module.

M Newman
K Bennett
J Morgan

Education or intimidation? The learning experience in Obstetrics and Gynaecology operating theatres.

N Haughey
J Costa

Effects of formal teaching compared with self-directed learning on student ultrasonography skills: randomised controlled trial

R Thorley
S Ball
K Pearce
J-Shiunn Wong
S Iles

Evaluation of the effect of a ‘Peer Assisted Learning’ tutor training workshop and practical teaching experience on student tutor confidence in teaching ability

A Samuels
P Davies


R Kehoe
M Hegarty
N Gildernew

Exploring medical student learning in the large group teaching environment: Examining current practise to inform curricular development

C Luscombe
J Montgomery

Exploring the impact of a unique Wilderness and Expedition Medicine course on undergraduate leadership, teamwork, situational awareness and problem solving

J McDonald
M Harris
A Radford
T Godfrey
S MacDougall
S Wysling
K Jones
<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food for Thought - A Multidisciplinary Approach to Teaching Nutrition Skills</td>
<td>H Burton, J Fawcett, S Hall, N Botting, A Beale, J Sansom</td>
<td>W8</td>
</tr>
<tr>
<td>Fourth Year Medical Student Perception of the Use of Visual Likert Scales to Self-Identify their Learning Needs during the Ageing and Health Module</td>
<td>G Kennedy, I M Rea</td>
<td>W9</td>
</tr>
<tr>
<td>General Practice in the simulation suite: Encountering emergencies in primary care</td>
<td>M Harris, A Woodman, M Natarajan</td>
<td>W10</td>
</tr>
<tr>
<td>How does a study skills programme impact self-regulation of learning among preclinical medical students?</td>
<td>D De Oliveira</td>
<td>X1</td>
</tr>
<tr>
<td>How much of a buddy is a buddy? The value of near-peer mentoring to final year medical students in becoming a foundation doctor.</td>
<td>D Mann, R Gayner, E King, N Adams, A Tomsett, R Adhikary, N Jakeman</td>
<td>X2</td>
</tr>
<tr>
<td>How ready are our Medical Students for Clinical Contact?</td>
<td>H Thursby</td>
<td>X3</td>
</tr>
<tr>
<td>Identification and Exploration of the Expectations and Experiences of BM6 Students Entering Medical School</td>
<td>J Alom, S Curtis</td>
<td>X4</td>
</tr>
<tr>
<td>Paper withdrawn</td>
<td></td>
<td>462</td>
</tr>
<tr>
<td>Integrating Human Trafficking into the Undergraduate Medical Curriculum</td>
<td>M Corrigan, M Cooper</td>
<td>X6</td>
</tr>
<tr>
<td>Introducing third year undergraduate medical students to the principles of consent using a combination of small-group teaching and simulation-based learning</td>
<td>M Harris, J Moffatt, M Natarajan</td>
<td>X7</td>
</tr>
<tr>
<td>Introduction of a NHS hospital paperless medical record system: lessons to be learnt for undergraduate medical education</td>
<td>H Fox, R Talker, I Ng, C Maclennan, A Gibbs, J Thomas, R Davies, M Lillicrap</td>
<td>X8</td>
</tr>
<tr>
<td>Is tutor enthusiasm perceived differently by students and faculty?</td>
<td>T Lovatt, M Bartlett</td>
<td>X9</td>
</tr>
<tr>
<td>Junior Grand Round: One Year On, What we have learnt</td>
<td>J Fawcett, E Grove, N Botting, S Hall, H Burton, J Sansom</td>
<td>X10</td>
</tr>
</tbody>
</table>
Keogh, Berwick and Beyond: How Integrated is Audit and Quality Improvement into Medical Student Curricula?
S Sinha
J Mushtaq
Z Htoo
M Colquhoun
C Ratneswaran

Learning before medical school: Personal reflections on volunteer involvement in an NHS Emergency Department service improvement project.
G Chaplin

Paper withdrawn

Medical leadership and clinician managers – time to engage undergraduates?
C Hobbis
E Burleigh
N Osman
H Begum
S Miah

Medical student empowerment during teaching; does the grade of teacher influence outcome.
P Orchard
S Leong
H Claireaux
I Hunter
J Coulston

Medical student involvement in and benefit from research and audit experience: the MEDical Student Experience of Audit and Research (MED-SEARCH) survey.
S Trethewey
R Norman

Medical student Resilience: A cross-sectional study
M Doris
C Mulholland

Out of Hours Experience as a Medical Student: What Do Students Think?
G McGrory
A Collins
A Riddell

Paying it Back! A pilot FY0 led Peer Teaching OSCE Course.
A Bannon
C Clendinning
S Kirk
N Leonard

Pharmacists on the Frontline: Lecture Based Acute Simulation (LBAS)
C Ratneswaran
J Mushtaq
K Dodd
T Khong

Piloting the use of simulation to develop medical students’ skills in the assessment and management of acutely unwell older people.
R Adhikary
D Mann
E King
N Adams
A Tomsett
R Gayner
N Jakeman

Prescribing Simulation: A Tool for Advancing Undergraduate Medical Student Confidence in Prescribing Skills
E King
N Adams
A Tomsett
R Gayner
R Adhikary
D Mann
N Jakeman
Prescribing Simulation: A Tool for Advancing Undergraduate Medical Student Prescribing Skills – The Students' Perspective

Radiology teaching: medical student perspectives on an integrated approach with bedside teaching

Research methods: ‘Data-mining’ subjectivity through point of View (PoV) filming and the elicitation interview

Should research and audit projects be compulsory during undergraduate medical training? The MEDical Student Experience of Audit and ResearCH (MED-SEARCH) survey.

Simulated Practical Wound Care Competency for Undergraduate Medical Students

Something for everyone: Can the same radiology tutorial be useful and accessible to multiple year groups? Evaluation of a pilot course

Story telling to assist learning in undergraduate medical education

Student perceptions of and motivations to attend non-compulsory, near peer prescribing teaching

Student Selected Components – What do the students think?

Student vs Professional evaluations of PBL teaching in medicine: a comparative study

Students' views about having a Peer Problem-Based Learning Tutor

Teaching 5th year students in the OSCE final exam revision day: the benefits and challenges for the near-peer teacher.

The “Breakfast Club”: so much more than croissants. Evaluation of an innovative undergraduate medical education scheme at Nottingham University Hospitals NHS Trust.

The design and evaluation of an undergraduate teaching skills course for medical students

The impact of an information sheet on disability to student satisfaction of an Early Clinical Experience General Practice visit
The Impact of Teaching Fellows in a Paediatric Hospital- Review of Student Feedback
S Scales S Evans F Parker C Van Lennep

The quantity and quality of feedback obtained by Manchester Medical Students during Rheumatology and Orthopaedics.
J Oldbury B Sanderson P Watson

The Teaching and Learning of Situational Ethical Judgements; a Learning Experience.
K Burnett M McInerney P Fisher

The Use of Online Case-Based Materials In the Teaching of Neuroanatomy to Undergraduate Medical Students
L Brammar M Gatumu

Time to Save a Life? A new escape room game to educate medical students on collaborative working and critical thinking.
J Hawkins C Earnshaw Z Hossenbaccus YYS Ho P Davies C Rodd

To simulate or not?
E Bruce P Watson

Tomorrow’s doctors, today’s researchers: a pilot study of incorporating primary research in medical education
A Loizidou J Hapeshi P Fletcher

Tools to support early student personal and professional development on a graduate entry medicine programme - peer feedback and Myers Briggs personality type indicator with evaluation
B Marshall A Mahmood H Hussain C Nesbitt S Parr

Using multidisciplinary simulation to evaluate how fourth year medical students perceive the scope of paramedic practice
J McDonald J Hambidge A Woodman K Else M Natarajan

Using technology enhanced learning to improve medical students’ understanding and application of public health principles to clinical practice
B Kumaravel E Filmore J Hearn H Jenkins

Utilising ‘Red Flag’ Ideology to Encourage Community Pharmacy Service Provision
C Ratneswaran J Mushtaq D Vamathevan T Khong

Paper withdrawn

What do Medical Students find useful on Clinical Placement?
H Thursby
Basic Science/
Biomedical Teaching
& Assessment
Paper withdrawn
Can the use of eye-tracking determine when novices become experts in facial skin cancer reconstruction?

TWM Walker, L. Moore, G Knepil
TWM Walker, Department of Oral & Maxillofacial Surgery, Gloucestershire Royal Hospital NHS Trust, Gloucester, Great Western Road, GL13NN

Background and Purpose
Research has investigated the visual search processes involved in several aspects of medical decision-making revealing that the faster, more accurate, and more confident decisions made by experts (i.e., consultants) are often underpinned by faster fixations towards key areas of the display and longer durations fixating these areas (e.g., Wood, Appelboam, & Wilson, 2013; Wood, Knapp, Roobottom, & Wilson, 2012). This study will be the first to apply this work to wound repair in skin cancer surgery, examining if perceptual differences exist between experts and novices in this field.

Methodology
Following an expertise paradigm, 10 pre-fellowship trainee and 10 senior registrar/consultant oral and maxillofacial surgeons will be recruited. After indicating their level of training and skin cancer surgical experience, the surgeons will be presented with 10 standardised images of a post-excisional biopsy defect while wearing the mobile eye-tracker. The surgeons will be asked to examine these 2-dimensional images, consider the reconstructive options, and state their reconstructive choice and their confidence in this choice. Gaze data will be recorded while the surgeons view each image (i.e., number of fixations, durations of fixations etc.).

Results
Data collection is ongoing but it is predicted that compared to the trainees, the expert oral and maxillofacial surgeons will make faster, more accurate, and more confident decisions regarding reconstructive options as well as display more effective gaze behaviour (i.e., fewer fixations of longer duration to key areas of images).

Discussion and Conclusions
It is hoped that this study will give a better understanding of the perceptual-cognitive processes underpinning the expert advantage in decision-making in reconstructive surgery. The findings of this study could also be used to help improve the decision-making of trainees by encouraging trainees to adopt the visual search patterns employed by experienced surgeons (i.e., fixate key areas sooner and for longer). Finally, it is hoped that eye-tracking technology will also help assess when trainees reach the standard of consultants in facial skin cancer reconstruction.

References

Managing uncertainty: teaching the requisite communication skills to final year medical students.

Jordan, N, Heyworth, I
NPD Jordan Clinical Lecturer, Community Based Medical Education, Manchester Medical School, Oxford Road, Manchester M13 9PL

Background and Purpose
GPs routinely face the challenge of differentiating self-limiting complaints from early stages of more serious illness, but with patients often presenting with vague and disorganised symptoms, an immediate diagnosis is not always viable. Learners find managing this uncertainty unsettling and as a result may seek to overcome it through over-investigation, however, in low prevalence environments like primary care, this may paradoxically cause harm and heighten patient anxiety (Merril et al. 1994) (Ogden et al. 2002) (Sonnenberg 2001).

Methods
A literature review was undertaken to identify the strategies experienced GPs might utilise in managing uncertainty effectively. It was apparent that within the primary care consultation, careful use of communication was the most effective tool; therefore we aimed to develop a teaching session providing an opportunity for final year students to develop these skills. A small group session was delivered, adopting a problem-based approach and utilising experiential, participatory and active methods. The pilot was evaluated through a focus group and quantitative feedback

Results and discussion
The results of the literature review, in addition to the structure and content of the teaching session, will be presented. Evaluation of the pilot showed students ranked the session highly on value and importance statements. Of greater interest were the clear difficulties students experienced when participating in scenarios lacking a definitive diagnosis. Students had become accustomed to communication teaching and OSCEs with unambiguous resolutions and struggled to adapt their approach to the complexities of real life problem solving.

Rather than dismiss managing uncertainty as an attitude to be honed through years of clinical practice, we believe that to prepare medical students for the vagaries of clinical practice it should be valued as a skill to be taught and developed and included within curricula.

Background and Aims
The use of peer teaching in medical education is growing, supported by several perceived benefits to both the learner and the teacher\textsuperscript{1, 2}. Its application in practical anatomy classes has already been evaluated with promising results\textsuperscript{3}. This study aimed to evaluate how learners perceive near-peer teaching (where senior students act as tutors) in specific timetabled blocks of Anatomy in Years 2 and 3 of the undergraduate medical curriculum at the University of Aberdeen.

Methodology
Final year medical students were recruited as near-peer tutors and allocated to practical anatomy sessions for year 2 (Gastrointestinal) or year 3 (Reproductive) blocks. Peer learners completed a feedback questionnaire comprising Likert scale and free text responses which evaluated: their perception of near-peer teaching; the impact of near-peer teaching on their knowledge and understanding of anatomy; and the quality of teaching delivered. Likert scale responses were converted to numbers (1 representing strongly disagree to 5 representing strongly agree) and the medians (interquartile range (IQR)) assessed. Associations between learners’ demographic characteristics and Likert scale ratings were also evaluated. Free text responses were analysed qualitatively.

Results
One hundred and forty-nine students (out of a possible 338) completed the questionnaire. Sixty-six percent of respondents were female. Overall, near-peer teaching was well received by students with 92% favouring its introduction into anatomy practical classes for other systems. Students agreed that peer teaching helped to improve their understanding of the topics covered (median (IQR) 4 (4, 5)), and their clinical relevance (median (IQR) 4 (3, 4)). They agreed that peer tutors were as engaging as anatomy staff and able to communicate effectively (both medians (IQRs) 4 (4, 5)). Initial analysis of the free text responses indicated that the main negative feedback given by students related to the peer teacher giving them incorrect information. Despite this, it was generally felt that peer tutors were well prepared for their teaching (median (IQR) 4 (4, 4)) and that the information given by peer tutors was as accurate as the information given by anatomy staff members (median (IQR) 4, (3, 4)). Females were more likely to respond positively in the Likert scale ratings compared to males.

Discussion and Conclusion
Our results indicate that most medical students find near-peer teaching beneficial and would support its application in practical anatomy teaching. It is hoped that further qualitative analysis of the free text responses in the questionnaire will identify further advantages and disadvantages of near-peer teaching.

References
The Effect of a Peer Instigated and Delivered Mock Examination on the Confidence and Preparedness of 4th Year Medical Students Undertaking the Liverpool Objective Clinical Assessment System (LOCAS) Finals Examination

Goldsmith T, Platt S
Thomas Goldsmith, Flat 24, 44 Pall Mall, Liverpool, L3 6EL

Background and Purpose
The Liverpool Objective Clinical Assessment System (LOCAS) is a clinical examination undertaken by all Liverpool Medical Students as part of their medical school finals. Formal teaching and practice for the format of this examination is not provided to students, nor is a formative mock examination. We set out to study the effect on student confidence following a peer instigated and delivered mock LOCAS examination designed to reproduce the format and content of this assessment.

Methodology
The senior author supervised TG, a 4th year medical student, in preparing and executing mock examinations at Wirral University Teaching Hospital. The examinations ran as six sessions over two days. Participating students attended two sessions each; one as a candidate and another as a simulated patient. Junior doctors volunteered as examiners; some students also performed this role. The students were examined under the LOCAS format, according to mark schemes constructed by fellow students.

Participants graded from 1-10 their confidence in their preparation for LOCAS both before and after the sessions. They were also evaluated after the real exam.

Results
36 students undertook the examination. 30 examiners were recruited; 18 junior doctors; 12 students. 19 students submitted feedback. Mean confidence pre-mock exam was 5.9, which rose to 7.9 post mock exam. A paired T test on the scores calculated a P value of <0.0001 implying significant significance. The mean score for satisfaction was 8.4. All students passed the LOCAS exam subsequently. 20 students responded to long term follow up, of whom 19 (95%) acknowledged the mock examination as a contributing factor to their eventual exam success. Many cited beneficial experience of taking on roles of examiner and simulated patient, in addition to partaking as an exam candidate.

Discussion and Conclusions
This peer instigated learning opportunity showed benefit in preparing candidates for the LOCAS. Subjects demonstrated statistically significant increased confidence. We postulate that exam success implies a prolonged effect of the intervention. This peer lead teaching was specifically designed to facilitate confidence in exam success; we have shown significant positive effect on the learners.
‘But I thought it was real!’ increasing fidelity in a simulation programme

S Scholes, E Wooding, T Guest
S Scholes, Royal United Hospital, Combe Park, Bath, Somerset BA1 3NG

Background and Purpose
Simulation is a common medical teaching methodology; however it remains unclear if training for acute emergencies using a sim-man corresponds to enhanced treatment of real patients\textsuperscript{1,2,3,4,5}. In addition, ‘High’ fidelity is inconsistently defined between the literature\textsuperscript{6,7}. We report a descriptive feasibility study, where psychological and technical fidelity was increased to a point that our simulation could not be distinguished from real. Our primary aim was to show that near-real methodology can be used to assess trainees’ ability to review an acutely unwell patient. Our second aim was to compare trainees’ treatment of a sim-man with a near-real patient. A comprehensive literature search did not reveal any directly comparable studies. Relevant meta-analyses, studies and critical reviews detailing covert or unannounced standardised patients, or hybrid actor/simulator scenarios informed the study\textsuperscript{1,4,5,8-10}.

Methodology
A cohort of final year students attended an on-call simulation before graduation 2014. Over two hours, they prioritised and completed jobs before being fast-bleeped to an unwell patient with realistic haematemesis on a ward; actually an actor under covert video observation. Several permutations of environment were explored. 26 of 34 students experienced the scenario on an acute respiratory ward and eight in a gastroenterology clinic. 24 were met by a Healthcare assistant or nurse and 10 by a doctor.

Results
On the acute ward, seven believed the situation was real and 19 for part of the scenario. Of these, only 10 disbelieved the situation’s authenticity. Nine were unsure but treated it as real, citing high stakes as the reason. All attending the clinic recognised a simulation as there were no other patients and the environment changed their engagement with the patient. The person meeting participants at the patient’s room influenced the trainees’ assessment.

Discussion
We assessed participants throughout their mandatory simulation programme and near-real experience. We inferred that behaviours of participants believing the near-real scenario represented those when assessing a real patient. We cautiously interpreted differences in the relevant sim-man and near-real simulations, of these participants, as being due to the difference in fidelity. This may be due to the emotional component\textsuperscript{7,11} or increased responsibility in high-stakes scenarios.

Conclusions
1. It is feasible to use this methodology
2. Scenario fidelity profoundly impacts participants’ behaviour
3. Simulation alone does effectively prepare students for acutely unwell patients

References
11. Demaria, S., Bryson, E., Mooney, T., Silverstein, J., Reich, D., Bodian, C., Levine, A., 2010 Adding emotional stressors to training in simulated cardiopulmonary arrest enhances participant performance; med educ 44 (10) 1006-1015
Paper withdrawn
Ophthalmology teaching: A model to integrate ophthalmology within the core medical curriculum

Jawaid I, Amoaku WMK
Jawaid, I, Department of Ophthalmology, Queens Medical Centre, Derby Road, Nottingham NG7 2UH

Background
The teaching of ophthalmology within the medical school curriculum has reduced in the UK and the USA. Eye problems represent 1.5% of presentations to GPs and consultation rates have been recorded at 71.8 per 1000 population per year. Further, fundoscopy is part of the foundation programme curriculum. It is unsurprising, therefore, that primary care practitioners feel that their undergraduate ophthalmology training is inadequate and reflects in their confidence. This has led to the paradoxical argument that fundoscopy should be completely removed from the medical school syllabus and replaced with knowledge of using a fundus camera.

Bruner’s theory of the spiral curriculum whereby complex ideas can be taught at simple levels early on and then re-visited at more complex levels later-on underpins much of clinical teaching today.

We propose a model to implement the teaching of ophthalmic examination using the spiral curriculum to promote independent problem solving in ophthalmic presentations.

Model

<table>
<thead>
<tr>
<th>YEAR</th>
<th>Setting</th>
<th>Knowledge</th>
<th>Competencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1+2</td>
<td>Clinical skills training – direct ophthalmoscopy Lecture/seminar</td>
<td>Pupil pathways, blood supply to the eye, visual pathway, ocular and orbital anatomy</td>
<td>To draw fundus of colleague they are examining</td>
</tr>
<tr>
<td>3</td>
<td>Ophthalmology rotation (2 weeks)</td>
<td>The ocular examination – ophthalmoscopy, pupil examination, confrontation fields, vision assessment, eye movements</td>
<td>Retinal signs – retinal haemorrhage, cotton wool spots, disc swelling</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Identify media opacity obscuring red reflex</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Identify an RAPD</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Diagnose manifest deviations</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Perform and interpret confrontation visual fields</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Assess and interpret visual acuity</td>
</tr>
</tbody>
</table>
| 4+5  | Integrated ophthalmology | Medicine: Headache, diplopia, New murmur, Pyrexia of Unknown Origin  
Endocrinology: Pagets, Diabetes, Thyroid disease, Cushings disease  
Obstetrics+Gynaecology: Eclampsia  
Paediatrics: Neonatal red reflex | Identify abnormal ocular findings and be assessed on use of ophthalmoscope associated with core disease knowledge |

Discussion
Ophthalmology teaching lags behind other aspects of the medical curriculum. Undoubtedly, this leads to a lack of assumed importance by students and a lack of confidence once in practice. Whilst other areas of medicine and surgery have advanced teaching with the use of interactive on-line and simulated clinical encounters, ophthalmology teaching remains one dimensional. Until this improves we cannot expect the scenario whereby low confidence and low technical ability lead to adequate diagnostic ability. The paradoxical answer put forward by some accepts this outcome and turns towards expensive and non-mobile technology to visualise the fundus. Current economic circumstances make this highly unlikely to improve diagnostic powers. However, we feel that our model would help to improve standards by integrating ophthalmological skills within the medical curriculum.
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6. Purbrick RMJ, Chong NV. Direct ophthalmoscopy should be taught to undergraduate medical students – no. Eye (Lond) 2015; 29: 990–991
OSCE abdomen and respiratory stations are the most difficult: have they been forgotten?

K El-Said Dawoud, G Burton and R Parikh
K El-Said Dawoud, Foundation Year 2 Doctor, The Pennine Acute Trust – Royal Oldham Hospital, Rochdale Road, Oldham OL1 2JH. United Kingdom

Background and Purpose
In the trust’s annual OSCE revision course for medical students, designed and delivered by recent graduates, the previous year’s cohort surprisingly identified abdominal and respiratory component stations as the two most challenging areas. This was unexpected - the literature overwhelmingly suggests students believe neurological stations to be the most challenging.\(^1,2\)

Thus, we explored key areas of difficulty in the abdominal and respiratory stations to uncover underlying themes complicating these stations to inform educators’ future approach to these stations.

Methodology
The abdomen and respiratory stations involved a student examining a healthy volunteer whilst being examined by a foundation trainee, culminating in a question/answer session and feedback.

Questionnaires were developed exploring learners’ preparedness and confidence with these stations pre- and post-course. Learners were asked to rate themselves on a Likert scale (1 not confident – 5 very confident) and give examples of specific weak areas. Learners were invited to use both pre- and post course questionnaires to rate their confidence level in the following (for both abdomen and respiratory stations): performing the examination; understanding pathophysiology; eliciting signs; diagnosis and constructing a management plan.

Results
35 students attended the course. Pre-course, students rated their confidence with the respiratory and abdominal examination routine as 3.5/5. Lower confidence was reported for detecting clinical signs and formulating a diagnosis and plan. Learners’ explanations for these self-ratings could be divided into generic and specific problems.

- **Generic problems** included: time pressures; stress; clinical inexperience and past “bad experiences”.
- **Specific (abdomen):** recognition of signs (surgical scars, hernias etc.) and management plan construction due to the diversity of pathology. Learners also highlighted discussing “investigations in the correct order” and “remembering eponymous signs” as weak areas.
- **Specific (respiratory):** eliciting/interpreting clinical signs in order to formulate a diagnosis. “Time keeping” and “identifying wheeze/vesicular/bronchial breathing” were also common themes of difficulty.

Discussion and Conclusions
This study has further explored learner difficulties in the abdomen and respiratory stations to help inform trainers and better match teaching given to learner needs. Much of the literature highlights medical student difficulty with neurological stations coining the term: “neurophobia”.\(^3\)

Consequently, this may be negatively impacting on students’ confidence by distracting focus of medical students off traditionally less troubling stations, such as abdomen and respiratory. Further study needs to be undertaken to explore medical educators’ perceptions of medical students’ areas of weaknesses and ensure core teaching of key medical examination skills are not being overlooked or disregarded.

References
Communication Skills
“Comms Cards” – A novel resource for communication skills teaching in medical students.

J Kennedy, L Fisher, Z Thomson
J Kennedy, Dundee University Medical School Undergraduate Office, Level 7, Ninewells Hospital, Dundee DD2 1BU

Methodology
This teaching resource was designed and developed as a joint project between academic staff at the University of Dundee and a 4th year medical student as part of a summer scholarship project. Summer scholarship projects offer paid employment to students who have an interest in medical education to complete a medical education project over a 6 week period.

Results
As this is a poster presentation there are no results of any research. The purpose of this poster is to share new innovations in teaching and learning.

Discussion and Conclusions
Student feedback for communication skills in our institution is generally positive, with students valuing the opportunity to put theory in to practice in the context of the consultation. Communication skills is normally taught in simulated environments using volunteer patients in role play interactions. (1, 2) The organisational elements of this type of teaching often result in infrequent opportunities for students to individually practice and develop their skills. This was reflected in our feedback which identified that students wanted more opportunities to practice their communication skills. In the absence of any additional time to teach communication skills, a novel approach to this problem was identified with the development and introduction of “Comms Cards” (see appendix). “Comms Cards” sessions were instituted within the existing communication skills timetable avoiding the need for space in the curriculum to be created. They were utilised in small group teaching sessions using pairs of students in a speed dating type format. Speed dating in the context of communication skills has been used previously and positively evaluated.(3) The content of the cards were mapped to Tomorrow’s Doctors 2009(4) and to core clinical problems (CCPs) on which our curriculum at Dundee is based. They were also individualised to different year groups. This initiative was based on the successful development of CASE cards by the RCGP which were developed to support postgraduate trainees to practice some common skills required in the consultation (5). Anecdotal feedback from students at this stage is very positive.

Appendix 1

References
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Assessing the Impact of a Novel Approach to Referral Skills Teaching for Foundation Doctors

E Hampton, D Smith, B Hale
E Hampton, Clinical Teaching Fellow, Medical Education Directorate, Royal Infirmary of Edinburgh, Little France Crescent, Edinburgh, Scotland.

Background and Purpose
Foundation doctors often feel underprepared \(^1\) and find the transition from student to FY1 stressful \(^2\). Making referrals is an essential clinical skill however students describe minimal training in this area. All final year medical students in Edinburgh participated in telephone referrals prior to commencing clinical practice (March 2015). Referrals were made to registrars, who assessed the relevance of the information and safety of the plans. These workshops were well received increasing both subjective confidence and competence in the students. We explored the impact of this training session on students who returned as Foundation doctors five months later to see if key skills/knowledge had been retained. We also assessed whether this teaching approach led to greater objective competence.

Methodology
As part of their induction programme in August 2015, all new FY1s in NHS Lothian participated in telephone referral workshops. New clinical cases were developed, with the same marking proforma and faculty maintained to improve standardisation. After a few minutes with a written clerk-in, FY1s made telephone referrals to registrars (for advice, review, escalation or a task). Mobile speakerphones were used to engage the whole group of 5-6, with a different case for each member. Following the referral, the participants were marked on a Likert scale for relevance and safety. Medical school and previous referral training were recorded after the marking for blinding.

Results
137 FY1 doctors participated: 44 trainees were from Edinburgh and had previously attended the original referral session. The remainder attended other medical schools, with 21 having some form of referral training and 72 reporting none. Trainees who attended the original Edinburgh programme on average scored higher on objective marking for making a relevant referral with appropriate information and questions and finishing with safe plans for their patients. There was no significant difference between trainees from out with Edinburgh regardless of previous referral training.

Discussions and Conclusions
This follow-up study suggests that this interactive referrals simulation programme improves performance and skill retention for junior doctors, with higher objective scores than those who had not participated with this referral training. No intervening teaching for these groups could have confounded in the transition to FY1, although it is difficult to prove causation in the complex world of medical education or to account for individuals’ clinical experience.

Our telephone referral programme will continue, with a view to integrate with established popular handover training across NHS Scotland.

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Difficult decisions: a Qualitative study of Surgeons experiences

Humphreys AK, Bamford R, Coulston J
Humphreys AK, Health Education South West (HESW), Severn Deanery

Background
Reflection plays a vital part in the self-development and progression within Surgical training. These experiences provide a wealth of impact on a personal level and the benefit is applicable for further discussion and training to improve patient safety. As yet there is no accepted deanery wide forum within which to share these experiences.

Aims
The aim of this study is provide examples of real life and time scenarios from a variety of surgeons of varying experience with the aim of developing scenarios to incorporate these into a simulation training curriculum. The primary outcome was to establish a variety of clinical circumstances that could be utilised to provide realistic and relevant training opportunities to be simulated using NOTSS taxonomy.

Methods
Core Surgical Trainees, Higher Surgical trainees and Consultants of various surgical specialties were invited to give examples of real life “challenging” clinical/surgical or behavioural scenarios. Examples were submitted anonymously via an on-line survey tool and the results pooled and analysed by two reviewers. These scenarios were then collaborated to form the basis of a simulation curriculum to enable trainees within the region to simulate the experience and practice using the NOTSS taxonomy. The data was triaged into specific training themes, allowing development and reflection for core and higher surgical trainees. These training themes were allocated into a three stage validated training programme.

Results
Pending

Discussion
The scenarios provide a framework within which a realistic simulation curriculum could be expanded to provide training opportunities for other trainees. This concept could be further developed within the region by providing a pan-specialty and pan-level forum to allow personal reflection and development on challenging situations.
Experiential Communication Skills training for Medical Undergraduates

Bold F, Hartland J, Jones K
Bold, F, Swindon Undergraduate Academy, Great Western Hospital

Introduction
In the UK, 1 in 7 people are registered deaf\(^1\), and a third of strokes result in aphasia, both receptive and expressive\(^2\), affecting peoples’ ability to communicate. We wanted to explore how communication skills teaching can be developed to help students better understand some of the difficulties patients with these disabilities experience. The ability to communicate is essential of healthcare professionals, and is outlined in the GMC foundation requirements of junior doctors\(^3\). Research has shown that when communication is well practised in the clinical setting, it can result in increased patient satisfaction and treatment outcomes\(^4\). Medical education dedicates a substantial amount of time to communication skills teaching and research, and the literature demonstrates that experiential learning in medical education has positive effects on meaningful learning\(^5\). We decided to incorporate these considerations into our communication skills teaching for University of Bristol 5\(^{th}\) year students during their ‘Preparing for Professional Practice’.

Method
The aims were to encourage students to think about alternative forms of communicating, the role relatives can plays during patient consultations, and to ensure the necessary information was both delivered and gathered to form a management plan, that the patient understood. Students were put into groups of three and given a role of one of patient, doctor or relative. Each student received written information beforehand, explaining their role in the scenario. This included information they had to deliver (doctor) or how the condition/sensory impairment (patient) affected their understanding. Each student played each part once.

Results and Conclusion
A direct observer feedback session will follow the session, where students will reflect and discuss how they felt within their role and how the communication affected them, and how it may change their future practice. An anonymous questionnaire will allow students to feedback on how useful the session was for improving their communication skills, and overall preparation for entering the clinical setting. These results will be statistically analysed using a paired t-test to ascertain if this is an effective method of delivering communication skills training.

References
Impact of a modified Geriatric Medication Game® on first year pharmacy students’ empathy and attitudes toward older adults

S Flynn, R O’Hare, S Haughey
S Haughey, School of Pharmacy, Queen’s University Belfast, 97 Lisburn Road, Belfast, BT9 7BL (s.l.haughey@qub.ac.uk)

The aging of the UK population will have a major effect on the future practice of pharmacy and healthcare provision. It is estimated by 2040, nearly one in four people in the UK will be aged 65 or over. In the UK, 45% of prescriptions are dispensed to patients over the age of 65.

It is imperative that healthcare students appreciate the challenges faced by our elderly patients and how this impacts on their overall medication use. The Geriatric Medication Game® was developed and used to specifically address the challenges experienced by elderly patients when managing their medication. Several simulation games and role-playing experiences to enhance student attitudes toward caring for elderly patients have been used in medical school curricula. However, few pharmacy courses in the UK have employed such methods to help their students understand the impact of aging, co-morbidities and polypharmacy for those patients using the healthcare system in the UK.

The aim of this project is to examine the impact of participation in an aging simulation game on first year pharmacy students’ empathy and attitudes towards older adults as well as their understanding of patients’ experiences of the health system.

The Geriatric Medication Game® has been modified for use with pharmacy students working in the UK healthcare system. It is a 3 phase game, in under an hour, a group of 10 – 20 students experience a concentrated sample of the physical, psychological and financial problems which make compliance with medications difficult for people over 65 years old.

The game will be piloted with a group of 20 first year pharmacy students in February 2016. In order to evaluate pharmacy students’ empathy and attitudes toward older adults, participants will complete a pre- and post - session questionnaire as part of a student project. Results from this project will show if this session enhances understanding and empathy and will help determine if the sessions should be rolled out to all first year MPharm students.

References
Infographics: Healthcare Communication for the Digital Age

McCrorie AD, Donnelly C, McGlade KJ
McCrorie AD, Medical Student, School of Medicine, Dentistry, and Biomedical Sciences, Queens University Belfast, Whitla Medical Building, 97 Lisburn Road, Belfast, BT9 7BL

Background and Purpose
Infographics are an engaging method of visually communicating and learning. Evidence suggests that visual communication helps us to better understand, learn about, and make decisions\(^1\). There is substantial interest in their use within commercial and healthcare sectors\(^2\). Interest is driven by public demand for good quality and accessible information\(^3\). Because healthcare professionals are likely to be consulted during their creation and use, we designed a number of infographics to demonstrate their potential.

Methods
Infographics were produced using a combination of Microsoft Word 2011, Infographics Word Edition version 1.1, and Adobe Photoshop CC 2015.

Discussion
Metaphorical infographics are an effective means of communication across language barriers\(^4\). Blood pressure results may be visualised using a traffic light analogy. A ‘red light’ informs viewer that blood pressure is high. Similar analogy-result combinations will likely also work well. Isotype array graphics represent increasing quantity as multiple identically sized icons. They are used to communicate positive and negative healthcare outcomes. This type of graphic may be suited to the understanding of dichotomous information such as the risk-reward ratio of statin usage. Word clouds are a method of visualising text in an attractive colourful manner. Words are clustered together and ranked in importance according to size, prominence, position, and colour.

Conclusion
Infographics are a useful and innovative means of communication with the public. They can also be used to improve decision making and learning.

References
Lessons in the use of simulation to train medical students in modern end-of-life care

P Leighton, H Mincher, A Dawson, H Walijee, A Cordey, B Warwick
P Leighton, Vascular Clinical Fellow, Musgrove Park Hospital, Taunton, TA1 5DA

Background and Purpose
There is only one chance to care for someone well at the end of life. Good quality care provides a dignified peaceful death. Doctors are central in the provision of this end of life care, which is currently under focus in the NHS, with the recent release of new guidance and significant media interest. Medical students receive limited teaching of end-of-life care, and rarely is this ‘hands-on’, practical teaching around the non-clinical aspects of care. There is a gap in their training, which has the potential to be filled with modern, simulation-based learning.

Methodology
We designed and ran a structured training course for final year students based on difficult communication skills using high-fidelity simulation. Ethical approval was gained. We used the simulation resources to create an end-of-life scenario, upon which we based discussions around aspects of care with the patient and family. The scenario was designed to be realistic, cost-neutral and run with a student-centred approach. We set-up the scenario to include:

- Discussions on a ‘do not attempt cardiopulmonary resuscitation (DNACPR)’ order
- Breaking bad news
- Discussions with distressed relatives
- Ethical dilemmas

We collected quantitative and qualitative data from students on their experiences. We used a structured thirteen-point questionnaire to assess quantitative effect of intervention. We additionally used joint interviews for qualitative feedback. We then used framework analysis to analyse our results.

Results
55 students have undertaken the session. There was a significant increase in confidence in the prescription of end of life medication (1.7 pre-test 3.3 post, p <0.0001) and communication (1.8 pre-test 3.5 post-test, p<0.0001) in the structured questionnaire. All students reported that the session was useful and none reported any previous training in this area. Students were more positive and confident in their knowledge of end of life care in the interview analysis. Verbal feedback included:

“I have had no other similar teaching on this topic”, “really valuable session”, “we need more sessions please!”

Discussion and Conclusions
In our study, we aimed to assess the suitability of simulation in training medical students to understand modern guidance on end of life care, in preparation for the foundation years. We achieved this with a simple, structured course that ran with minimal resources. We recommend the incorporation of high-fidelity simulation into undergraduate communication skills training. During the next stage of our project we plan to audio and video-tape students for personal reflection and feedback.
Situation Background Assessment and Recommendation (SBAR): Undergraduate Perspectives

C Morgan, L Adams, J Murray, R Dunlop, IK Walsh
IK Walsh, Centre for Medical Education, Queen’s University Belfast, Mulhouse Building, Royal Victoria Hospital, Grosvenor Road, Belfast BT12 6DP

Background and Purpose
Structured communication tools are used to improve team communication quality. The Situation Background Assessment and Recommendation (SBAR) tool is widely adopted within patient safety. SBAR effectiveness is reportedly equivocal, suggesting use is not sustained beyond initial training. Understanding perspectives of those using SBAR may further improve clinical communication. We investigated senior medical undergraduate perspectives on SBAR, particularly when communicating with senior colleagues.

Methodology
Mixed methods data collection was used. A previously piloted questionnaire with 12 five point Likert scale questions and 3 open questions was given to all final year medical students. A subgroup also participated in 10 focus groups, deploying strictly structured audio-recorded questions. Selection was by convenience sampling, data gathered by open text questions and comments transcribed verbatim. In-vivo coding (iterative, towards data saturation) preceded thematic analysis.

Results
233 of 255 students (91%) completed the survey. 1. There were clearly contradictory viewpoints on SBAR usage. A recurrent theme was a desire for formal feedback and a relative lack of practice/experience with SBAR. 2. Students reported SBAR as having variable interpretation between individuals; limiting use as a shared mental model. 3. Brief training sessions are insufficient to embed the tool. 4. Most students reported SBAR helping effective communication, especially by providing structure in stressful situations. 5. Only 18.5% of students felt an alternative resource might be needed. Sub analysis of the themes highlighted: A. Lack of clarity regarding what information to include and information placement within the acronym, B. Senior colleague negative response to SBAR C. Lack of conciseness with the tool.

Discussion and Conclusions
Despite a wide range of contradictory interpretation of SBAR utility, most students wish to retain the resource. More practice opportunities/feedback may enhance user confidence and understanding.

References
Sociodramatic Fish Bowl role-play in Last Days of Life communication teaching for postgraduate Foundation Year 2 Doctors

J Hartland, C Banks, K Jones
J Hartland, Clinical Teaching Fellow, The Academy, Great Western Hospital, Marlborough Road, Swindon, Wiltshire, SN3 6BB

Question
Can sociodramatic fish bowl role-play improve postgraduate doctors confidence in end of life conversations?

Introduction
Almost 50% of all deaths in the UK occur in a hospital setting¹ and the importance of good communication with a dying patient and their family can be easily seen in the outcomes of the Liverpool Care Pathway review by Baroness Julia Neuberger, which stressed inadequate communication as primary failing. Despite this there is evidence published in medical and educational literature that post-graduate doctors lack confidence in this area and do not feel prepared to deal with these kind of emotive situations¹. This project focuses on the use of sociodramatic teaching techniques² in the setting of a Fish Bowl role play, a small group teaching method which allows a safe environment for students to practice clinical encounters with the support of their peers, and permits the scenario to be ‘paused’ for key teaching points to be addressed immediately³.

Methodology
Over the course of 8 months multiple Fish Bowl sessions will be run with buzz groups that focus on learners experience and allow an organic design process to be built over a basic simulation scaffold. Immediately post-session learners will be anonymously surveyed with a combination Likert and rating scale to get subjective analysis of the sessions, including comparison to more traditional role playing methods. Participants were then followed up 6-8 weeks later with an online survey of the affect this teaching has had on their professional interactions with patients and relatives in the last days of life.

Results and discussion
Results are not yet available due to the on-going nature of the study, but all data will be gathered by June 2016. Our hypothesis is that this Fish-Bowl teaching simulation allows a more flexible approach to teaching communication skills, that students will prefer this to more traditional role play and that when guided by the learners needs the confidence of the learners in dealing with end-of-life encounters will be improved. Currently initial feedback points towards a positive learner experience and preference to this teaching style. Free text indicates learners find it to be more “supportive and safe”, and therefore learn better.

References
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3. R. Sutherland et al, Teaching a fishbowl tutorial: sink or swim? The Clinical Teacher, 2012; 9:80–84
The ‘windows method’ for student consultation skills: GP tutors’ experiences on a new method of giving feedback

A Newth
A Newth, Teacher Development Lead, Department of Primary Care and Public Health, Charing Cross Campus, Imperial College, St Dunstan’s Road, London, W6 8RF

Background and purpose
It is widely acknowledged that teaching communication skills is integral to medical student training to help develop patient centeredness. Year 5 students at Imperial College are given feedback on their consultation skills using videoed role-play with simulated patients. This is facilitated by GP teachers. We have used the windows method as an approach to structure feedback in these sessions. The ‘windows method’ was originally described by Professor Colin Coles from the University of Winchester and subsequently developed by a Scandinavian group led by Danish GP Jan-Helge Larsen. This method was originally developed for postgraduate doctors but was adapted for use in undergraduates by Dr Roger Neighbour. We aim to evaluate the windows method from the GP teachers’ perspective focusing on perceived advantages and disadvantages.

Methodology
Focus groups were conducted with GP teachers who attended a training workshop with Dr Roger Neighbour and subsequently used the windows method in their teaching. The discussion was recorded, transcribed and analysed using thematic analysis.

Results
The majority of tutors felt this method enabled students to give more specific and descriptive feedback. All tutors were adapting the method to suit their individual teaching style and some tutors felt it was too prescriptive. The method did allow for greater discussion of the students’ emotions, however, there was discussion on the appropriateness of this in undergraduate student teaching and some tutors felt uncomfortable bringing up emotions.

Discussion and Conclusions
The windows method can help fill gaps that have been found with traditional feedback models and enables students to give more meaningful feedback to their peers. This study highlights the issue of discussing emotions after difficult consultations. Some of the cases used in the teaching involve complex emotional issues. Tutors views were split on whether overtly discussing emotions is a necessary part of communication skills training for year 5 undergraduate students. The ‘windows method’ states that emotions must be dealt with before real learning can occur. The issue of emotions in communication skills teaching is an important discussion topic in preparing students to make the transition to doctors when they will be faced with emotionally challenging consultations.

The method could be explored further through evaluating its use in less experienced teachers who may find the prescriptive format helpful, and in evaluating student feedback when compared with more traditional models of feedback.
The use of stakeholder-informed simulation in assessment: sharing experience from an undergraduate medical student disability awareness programme

D Bell, A Wilson, AL Gidwani, C Meneilly, VLS Crawford
D Bell, Senior Lecturer, Centre for Medical Education, The Queen’s University of Belfast, Whitla Medical Building, Belfast BT9 7BL

Background and Purpose
Amongst outcomes in GMC’s Tomorrow’s Doctors, medical graduates should be able to communicate effectively with physically-disabled patients. Lack of exposure and common misconceptions about physically-disabled people and their healthcare needs, present potential barriers to appropriate communication and management within the doctor-patient relationship. Local research revealed that due to timetabling constraints and scarcity of physically-disabled patients within the clinical environment during hospital attachments, only some medical students during their undergraduate training received opportunities to interact directly and specifically with such individuals; exposed students had significantly enhanced insight into the unique needs of this section of society and felt more confident in their own ability to manage such professional encounters appropriately in future. ¹

Methodology
We undertook focus-group research with physically-disabled young adults to explore their experiences, both good and bad, of previous interactions with healthcare professionals. Their experiences were intended to better inform development of authentic role-plays based on real examples of good and bad practice they had encountered. These role-plays were then filmed with the subjects’ assistance and marking schemes devised to assess medical students’ ability to communicate and manage treatment of physically-disabled patients presenting with common clinical conditions.

Results
The resource was evaluated by recruiting two cohorts of medical students: the first viewed the role-plays and related materials before themselves undertaking a role-play with a physically-disabled person, the second proceeded directly to the role-play. Those who had accessed the resource performed notably better in the subsequent role-play than those who had not, avoiding common mistakes and demonstrating superior communication skills and patient management. They valued opportunities to learn through self-directed study before active participation to reinforce and evaluate learning. The materials have subsequently been made available as a training resource for all students.

Discussion and Conclusion
This study demonstrates the value of recording role-plays for self-directed study, and also the use of simulation for formative and/or summative assessment. In agreement with similar studies such strategies foster appropriate attitudes and behaviours towards physically-disabled people within the medical student body, when access to such patients in the clinical setting is limited. ² Our approach is readily applicable to other disciplines and endorses involvement of external stakeholders in informing development and review of learning resources and their participation in assessment of students’ acquisition of attitudes and behaviours.

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Continuing Professional Development
‘Junior doctors as educators’ Should their involvement be more structured, formalised and recognised?

Z Hossenbaccus, P Davies, CD Rodd,
Z Hossenbaccus, Redwood Education Centre, Gloucestershire Royal Hospital, GL1 3NN

Background and Purpose
In the Good Medical Practice guidance, the General Medical Council (GMC) state that doctors should be prepared to contribute to teaching and training of doctors, other healthcare professionals and students¹. Although junior doctors provide informal teaching to students, there is little guidance on how to improve and develop this role. Such teaching is usually ad hoc and relies on medical students being at the right place, at the right time; performed randomly rather than a planned teaching event.

This study aims to create a Mentoring Scheme involving junior doctors as mentors to determine whether more structured teaching roles are beneficial for them in their development as educators.

Methodology
A Mentoring Scheme was created with mentors recruited from Foundation Year 1 and 2 doctors at Gloucestershire NHS trust. Each mentor was assigned 1 or 2 students to remain as their mentees for the duration of the Junior Medicine and Surgery placement at Gloucestershire Academy (University of Bristol). Mentors were provided with guidance on the type of teaching to provide with emphasis on observed history taking and observed clinical examination skills, on average, one hour per week. Mentors were encouraged to use an existing online teaching log (T-Log²) to record all their teaching and were offered opportunities for their sessions to be observed for real time feedback on their teaching.

Focus group meetings with the mentors will commence in February 2016 to explore their experience of the scheme compared to previous informal teaching, their role as a mentor and whether the scheme has contributed to the development of their educator role.

Results
Results of content analysis of focus group meetings will be presented.

Discussion and Conclusions
Doctors as mentors become acutely aware of their students’ strengths and weaknesses³. Over an extended period of time of observing their students, mentors may be better placed to tailor learning according to students’ needs and the results of this study will hopefully highlight this. It is hoped that the results will reinforce the idea that in order for doctors to develop themselves as educators, they need to feel supported with opportunities for feedback on their teaching. This will facilitate them in providing high quality clinical teaching. The results may also show that creating a system of rewards for teaching, a formal structure of accountability and monitoring is seen to be beneficial by the mentors. The idea of the Mentoring Scheme may be the first step in providing doctors with structure and ongoing support to develop their parallel role as educators.

Reference
Design of a bespoke Multi-Source Feedback tool for Clinical Teaching Fellow’s

C Earnshaw, J Hawkins, Z Hossenbaccus, YYS Ho, P Davies, M Sherwood, Z Dawood, CD Rodd.
C Earnshaw, Clinical Teaching Fellow, Gloucestershire Academy, University of Bristol, Gloucestershire Hospitals NHS Foundation Trust, Great Western Road, GL1 3NN

Background and purpose
The Multi-Source Feedback (MSF) assessment is utilised across Undergraduate and Postgraduate medical training and within the Consultant body. Assessors from the multi-disciplinary team are selected to evaluate various aspects of professional and clinical performance (1)(2). The GMC state doctors must demonstrate professional competence for both appraisal and revalidation (3) and the MSF is widely recognised as an integral part of the annual appraisal (1). However, current MSF tools have a strong slant towards clinical medicine and are not applicable for Clinical Teaching Fellow’s (CTFs) (2)(4). There is thus a need for a tailored 360° Multi Source Feedback (MSF) tool to assess CTFs against the domains of Good Medical Practice (3).

Methodology
Data was extrapolated from the results of a questionnaire; “What makes a good CTF?” Responses from undergraduate medical education faculty and medical students in 3rd, 4th and 5th year were analysed to attain the qualities required of a good CTF which were then incorporated into a tailored MSF for the CTF. The MSF tool will be peer-reviewed and integrated into the novel Gloucestershire Academy CTF e-portfolio for piloting in January 2016. Feedback regarding the content, ease of use and applicability will be obtained via free-text questionnaires and Likert scales.

Results
Analysis of free text questionnaires and data from Likert scales, completed by both assessors and CTFs, regarding the effectiveness, relevance, usability and authenticity of the MSF will be presented.

Discussion and conclusions
A CTF specific MSF tool is a novel assessment and has several uses:

3. The MSF will contribute significantly to the CTF’s portfolio of evidence in demonstrating their professional values in line with GMC requirements (5).
4. It can be used to give 360° feedback and guidance on CTF performance, professionalism and teamwork behaviours.
5. It is essential for a doctors’ GMC revalidation (6).

A bespoke MSF that encompasses the additional attributes of a CTF (beyond the clinical competencies expected of doctors in training) is imperative to ensuring their professional development and fitness to practice.

References
Peer Review of Teaching for GP Tutors: A Pilot Project

A E O’Brien, V M Mistry
A E O’Brien (Clinical Senior Lecturer), V M Mistry (Clinical Teaching Fellow), Academic Unit for Community-Based Medical Education, Barts and The London School of Medicine and Dentistry, Queen Mary, University of London, Garrod Building, Turner Street, Whitechapel, London E1 2AD.

Background and Purpose
Peer review of teaching is one method of reviewing delivery of teaching that involves gaining feedback about teaching from a variety of sources, such as students, peers, and a faculty member’s own reflections.¹ Barts and The London Medical School has 170 practices providing teaching to undergraduate medical students. Peer review of teaching is included in the SLA (service level agreement) and is a measure of teaching quality. However to date, this has not been supported by formal training. The aim of the pilot project was to develop a Barts and The London GP tutor peer review proforma and establish a formative process, which can provide evidence for appraisal and revalidation and meet quality assurance requirements of CBME (Community-Based Medical Education).

Methodology
Three training workshops were held between January and June 2015. The first workshop introduced the peer review process and a draft proforma, further developed after feedback from GP tutors. The second workshop provided training on the use of the agreed proforma and led to allocation of groupings for the pilot. The third workshop reviewed the outcome of this pilot and led to the development of a standard operating procedure. Further evaluation of the pilot is on-going using focus groups and expansion of the peer review process to all practices.

Results
A total of 25 GP tutors took part in the peer review process. Most GPs were reviewed and reviewed a different colleague. The overall opinion of GP tutors was positive. They found the process beneficial to their development and feedback included sharing of teaching methods and resources and encouraging positive behaviours. The main concerns were organisational in nature.

Discussion and Conclusions
The results show that it is possible to develop a peer review process to suit the needs of Practice-Based Tutors. The inclusion of tutors in the development of the process has offered a degree of ownership and shared responsibility for quality assurance of their teaching. Recognition of the logistical challenges is noted and will be addressed as the process is developed. Peer review is important in ensuring good quality of teaching and this process could be replicated at other medical schools.

References
The demise of firm based learning
Should certain aspects of this model be revived in the form of a Mentorship Scheme?

Z Hossenbaccus, CD Rodd
Z Hossenbaccus, Redwood Education Centre, Gloucestershire Royal Hospital, GL1 3NN

Background and Purpose
‘The firm’ is a key mechanism and organisational unit for apprenticeship style learning and predates the foundation of medical schools in the nineteenth century\(^1\). While some medical schools still use ‘the firm’ model for undergraduate clinical learning, a few use a model whereby students are placed in a series of clinical environments over short periods of time. Whilst this maximises the breadth of clinical exposure for students, the collegiate spirit of team working can be disrupted. Many students report that they find it difficult to access clinical staff with no focal person they can turn to for ongoing learning in the clinical environment\(^1\).

Among the assets of firm based learning are the aspects of team continuity and tailored learning opportunities. This study aims to reestablish these by the creation of a Mentorship Scheme for 3\(^{rd}\) year medical students at Gloucestershire Academy (University of Bristol), where firm based learning is not used.

Methodology
Foundation Year 1 and 2 doctors have been recruited to be mentors to 3\(^{rd}\) year medical students at Gloucestershire Academy during their Junior Medicine & Surgery (JMS) rotation. Each mentor has been allocated a maximum of 2 students to support for the duration of their JMS module. Mentors have been advised to meet their allocated students weekly to provide them with an hour of teaching from their observation of the students’ clinical examination and/or history taking skills. Mentors and their students will arrange a convenient time with each other for this to take place, such that the learning event is planned rather than opportunistic.

By use of content analysis of open-ended questionnaires, this study aims to investigate the students’ perspective and experience of the Mentorship Scheme. Of particular interest will be their opinions on the impact to their ongoing learning, clinical progression and collegiate nature of the scheme.

Results
Results of content analysis of open-ended questionnaires will be presented.

Discussion and Conclusions
The results of this study will help to identify whether the Mentorship Scheme provides students with a steady access point to allow for sustained supervision and continuity in their learning. The results may also highlight the benefits of having the same mentor over an extended period of time. Students may then experience bespoke learning that meets their learning needs, with the additional perk of forming positive professional relationships.

As the mentors become aware of their students’ personal strengths and weaknesses, they will hopefully be better placed to tailor learning and feedback. In combination with other learning opportunities, the Mentorship Scheme may prove to enhance learning experiences and optimise clinical progression for students on their path to becoming doctors.

Reference:
Development of an undergraduate specialty curriculum: a mixed methods approach

RA Steven, GJ Mires, S McAleer
RA Steven, Directorate of Medical Education, Ninewells Hospital, Dundee, DD1 9SY

Background and purpose
Papers published on undergraduate otolaryngology have shown that not all UK medical schools have a formal otolaryngology attachment, that the time dedicated to teaching in those which do is comparatively small and that qualified doctors feel that their training was inadequate(1-3). Avoiding curriculum overload is a challenge in the ever expanding field of medicine. Therefore it would be advantageous to be able to identify and include key components of a subject within a curriculum. Through a mixed methods approach the content of an undergraduate otolaryngology curriculum has been developed.

Methodology
Utilising a longitudinal transformation approach, a national questionnaire survey of practicing doctors was undertaken. The survey was devised from analysis of current UK otolaryngology curricula, literature searches and input from an expert panel. Following the survey, focus groups were conducted. Each step informed the next to establish core elements of a specialty curriculum.

Results
Examining current otolaryngology curricula revealed a high degree of variability between UK medical schools. The national survey revealed that the majority of participants felt that current otolaryngology education was inadequate and that there is a need for otolaryngology in the undergraduate curriculum. Acute conditions and examination skills in otolaryngology were identified as key areas. Red flags for head and neck cancer and how they present were also deemed important. Subgroup analysis revealed differences of opinion in a number of topics between different groups of doctors, for example Consultants and General Practitioners.

Discussion and conclusions
By utilising this method of curriculum development the end users, the doctors, have influenced how the content of a specialty curriculum is devised. Employing the opinions of a large number and range of practicing doctors ensures that the focus is on key areas of importance. The differences between subgroups raises questions about how curricula are developed and who is involved in this process. The results indicate a need for closer collaboration between doctors working in different areas at the curriculum planning stage. The results will be useful for those designing an otolaryngology curriculum or assessment specifically but it is hoped that the experiences are also of interest to those involved in the development of other specialty curricula.

References
Background and purpose
Assistantships are clinical placements in which students undertake the duties of a foundation doctor under appropriate supervision. Since 2009, UK medical schools have been required to include a student assistantship in their final year curricula. Current evidence suggests that assistantships increase medical students' preparedness for practice. However, models of assistantships vary greatly, and we do not know how different curricula affect students’ and educators’ experiences and engagement with learning and teaching during the assistantship period. In Wales, graduating students entering the Wales Foundation School (~66% of cohort) undertake their student assistantship in the same setting as their first foundation doctor post (F1). Those students not staying in Wales attend their assistantships in the posts allocated for incoming graduates (so, misaligned with their first F1 post). The aim of this study was to explore students’ and supervisors’ understanding of an assistantship and how alignment (or misalignment) with students’ first F1 post influenced their experiences.

Methodology
Qualitative narrative individual and group interviews were conducted with four participant groups: final-year medical students whose assistantships were aligned to their F1 (n=27); final-year medical students whose assistantships were misaligned to their F1 (n=18); foundation doctor supervisors (n=10); and consultant doctor supervisors (n=11). Interviews were audio-recorded, transcribed, anonymised and analysed using Framework Analysis.

Results
The majority of students and supervisors understood the purpose of the assistantship as an opportunity to 'learn the trade' through shadowing the foundation doctor. Students from both the aligned and misaligned groups developed confidence in performing the duties of a foundation doctor and became functional members of their teams. However, students and supervisors perceived that alignment created additional benefits. Foundation post alignment enhanced students' engagement with their placement and provided opportunities for workplace acclimatisation, reducing students' anxieties about starting work. Students and supervisors felt that undertaking an assistantship in a specialty unrelated to students’ first foundation post limited the utility of the experience.

Conclusions
Our findings suggest that experiences during student assistantships can be enhanced through aligning the placement with students’ first foundation post or, at least, matching the assistantship with students’ first prospective specialty. Further qualitative and quantitative longitudinal assessment is required to evaluate whether the perceived increase in students’ preparedness for practice translates into improved performance amongst foundation doctors.

References
How well understood is female genital mutilation (FGM) amongst ED staff and do we need to improve awareness?

E C J Worley
E C J Worley, 14 The Mall, Clifton, Bristol BS8 4DR

Background and purpose
FGM we see today is the ‘the tip of the iceberg’¹. That is the news report by the Guardian in 2015, and this statement is only going to become more relevant and true with the rate of immigration increasing. Having seen how media attention in the last few years around FGM was increasing¹, research began to see how much education medical students and junior doctors receive on the topic. The BMA in 2014 wrote about medical students requesting to have FGM teaching as a core topic through medical school². Yet so far at this University our teaching has simply consisted of a presentation by the inspiring young group, Integrate³. It was inspiring enough thought to research the extent of knowledge in doctors on the front line of medicine, in A&E. If knowledge was lacking, ideas could be made to see how FGM understanding could be improved.

Methodology
A questionnaire was sent out to A&E staff including receptionists asking their knowledge on FGM, whether they knew the local protocol and how they would like teaching on the subject. This questionnaire was undertaken in Swindon A&E. Understandably results may have altered in different hospitals and deaneries.

Results
36 questionnaires were returned and completed, 13 of those by different grade doctors. Of those results only 5 (14%) knew about the local protocols. Only 7 (19.5%) people said to be confident at identifying all types of FGM on a patient.

Discussion and conclusion
These results show that there is a lack of knowledge amongst medical staff in A&E. As FGM is becoming more prevalent the likelihood a practitioner will have to deal with such a problem is increasing. Yet at the moment it is not being integrated into the medical school curriculum so junior doctors and other healthcare workers need to be taught once qualified. The need to become competent around FGM is increasing, not only for the safety of the patient, but because it is becoming a legal duty to report FGM or suspected risk of FGM⁴. Due to time constraints, in my project I produced a leaflet for medical staff to use if they suspected a FGM case. It explained briefly about FGM and their local protocol they needed to go through.

References
Introducing Diving Medicine to the Undergraduate Curriculum

J Barr, J McDonald, T Goddard, K Jones
J Barr, Swindon Academy, Great Western Hospital, Marlborough Road, Swindon, SN3 6BB

Background
This year we are introducing a new Student Selected Component (SSC) in the study of Diving Medicine. This is being offered to ten third and fourth year medical students at Swindon Academy (Affiliated to The University of Bristol). Diving Medicine is concerned with the baseline health and fitness of divers, how pressure and environmental conditions affect human physiology and the potential after effects from diving. In the past year 226 medical incidents related to diving were reported in the UK\(^1\). The undergraduate medical curriculum has little teaching on diving related conditions, leading to divers being seen by GPs and Emergency Medics with limited awareness of this specialist area. In line with the GMC’s guidance on providing students with learning opportunities which integrate biomedical scientific principles with clinical practice\(^2\); this SSC course aims to introduce students to the impact of scuba diving on the human body and explore diving related illnesses, their diagnoses and management.

Method
This project will introduce a reproducible educational experience for students delivered as a 3 or 4 week SSC. To achieve these aims a variety of activities have been planned under guidance from experts in Diving Medicine. Students will attend a series of advanced physiology lectures and undertake a bespoke clinical placement. They will visit diving medicine facilities, including a hyperbaric chamber and put their knowledge into action through diving and simulation on a bespoke field trip. This aligns with GMC guidance for including simulation based learning opportunities and experiential learning increasing in complexity\(^2\). In addition the students will focus on a particular topic within Diving Medicine to produce their own project.

Results
Data will be collected and analysed from application forms to ascertain students’ motivations for completing the course. Feedback from participants and faculty will assess how the course has facilitated students’ development of leadership, teamwork, situational awareness and problem solving skills as highlighted by the GMC as key skills required by a clinician throughout their career. Quantitative feedback will be in the form of semantic differential scales, analysed using descriptive statistical analysis. Qualitative feedback will be collected in free text boxes and analysed with thematic content analysis.

Conclusion
This project offers a unique opportunity to deliver an exciting SSC developing the students’ knowledge of physiology, clinical skills, research skills and generic professional capabilities. The potential benefits of providing students with this experience are to raise awareness of diving related illnesses amongst medical professionals.

References
Paper withdrawn
Background and Purpose
The General Medical Council’s EQUIP study recommended that enhanced training in prescribing and therapeutics should be available to Foundation trainees. In response to this, Health Education England’s West Midland team commissioned the development of SCRIPT—an innovative eLearning programme designed to improve the prescribing knowledge and skills of newly qualified doctors. The University of Birmingham are conducting a multi-method evaluation to investigate trainees’ attitudes towards SCRIPT and the impact of the learning on their knowledge, clinical prescribing behaviours and organisational outcomes.

Methodology
Data was extracted from the Content Management System (CMS) for all mandated modules completed by West Midland trainees in the 2014-15 training programme: 1) Date module completed and time taken; 2) Test results; and 3) Module factors (e.g. word count). We also conducted focus groups and interviews to explore trainees’ perceptions of SCRIPT and its perceived impact on their prescribing in clinical practice. The data were transcribed and a thematic analysis performed.

Results
Using data extracted from the CMS, we found that some trainees exhibit suboptimal learning behaviours (e.g. skipping over module content) and that these are influenced by several factors. The total number of modules completed in one week peaked in late February and early June, and coincided with troughs in the time taken to complete the learning. This effect occurred directly prior to bi-annual progression reviews. Our qualitative analysis found that in general the content was perceived to be useful, though some modules were identified as irrelevant. The mandatory nature of modules and available time to complete modules affected engagement with the programme.

Discussion and Conclusions
SCRIPT eLearning helps to standardise prescribing education at postgraduate level. It achieves the key recommendations outlined in the EQUIP study, through the provision of prescribing education during foundation training and allowing feedback through the management programme. Our evaluation is informing the ongoing development of the programme and its integration into training. For example, we provide a structured learning plan to encourage regular use of the programme and recommend that trainees should be provided with protected study time during paid employment to complete the learning.

References
Development of an E-Learning Resource for integration into a blended learning program of undergraduate General Practice teaching

A Faherty
A Faherty, Discipline of General Practice, Clinical Science Institute, NUI Galway, Galway, Ireland

Introduction / Background:
E-learning is an approach to teaching and learning based on the use of electronic media and devices that has gained increasing importance in medical education. Studies evaluating e-learning have shown it to be an effective teaching tool associated with high student satisfaction, particularly when integrated into a curriculum alongside lectures and seminars for a blended learning experience.

Aims
Despite the evidence to support the use of e-learning, review of literature in the area of e-learning in medical education suggests there is a mismatch between how e-learning could be used and the actual reality of its use. We hope to encourage the use of e-learning by describing its potential benefits. This paper will enable medical educators to develop effective e-learning resources for their institutions by sharing our experiences and outlining a systematic approach to the process while identifying potential challenges.

Methods
We describe the process of developing an e-learning resource on depression created for the Primary Care and Mental Health curriculum of fourth-year undergraduate medical students. We review the literature to describe benefits of using e-learning in medical education. The methods, processes, and techniques we used in designing and developing a high quality e-learning resource are detailed.

We describe a step-by-step process that can be employed by medical educators to customise or create e-learning resources to meet the learning needs of their students. We outline the potential challenges involved and the need to pilot a prototype for any e-learning resource so that the resource can be refined and further developed.

Discussion
Despite the evidence to support the use of e-learning, review of literature in the area of e-learning in medical education suggests there is a mismatch between the perceptions of how e-learning could be used and the actual reality of its use. Perhaps this is because there have been few papers describing how to best go about developing e-learning resources for integration alongside more traditional teaching methods. Without adequate preparation or experience in developing e-learning tools, medical educators could easily make the mistake of simply transferring existing teaching into a new medium without taking account of the nuances of using technology in teaching. This kind of approach not only ignores the potential for technology to enhance learning but also runs the risk of allowing technology to drive the learning rather than the learner which can be detrimental.

Future study to evaluate the usefulness of our resource once implemented is required in order to ensure our aims match the outcomes and that the benefits merit the significant investment of time and money.

References
15. Laurillard D. Teaching as Design Science: Building Pedagogical Patterns for Learning and Technology. London: Routledge; 2012
Evaluation of an E-Learning Resource on Depression developed for use in a Blended Program of Undergraduate Primary Care Teaching

A Faherty
A Faherty, Discipline of General Practice, Clinical Science Institute, NUI Galway, Galway, Ireland

Introduction / Background
E-learning is an approach to teaching and learning based on the use of electronic media and devices\(^1\) that has gained increasing importance in higher education\(^2\). Studies evaluating e-learning have shown it to be an effective teaching tool particularly when integrated into a curriculum alongside lectures and seminars for a blended learning experience\(^3,4\).

Aims
While the benefits of e-learning are well documented in the literature\(^5-9\) it appears to be under-utilised in the area of medical education\(^10\). We developed an e-learning resource on depression for use as part of the Primary Care and Mental Health curriculum of fourth-year undergraduate medical students. This was in the context of an increase in student numbers. Developing e-learning resources requires investment of faculty time, money, and space that needs to be justified\(^7\) and the effect on outcomes and learners experiences also has to be considered. This study aims to examine the students’ assessment of this newly introduced learning platform.

Methods
Feedback will be taken from approximately 200 students on completion of the online resource. Students will be asked for suggestions for improvement to the resource and to score their responses on a likert scale to the following questions:

Did you enjoy completing the resource? Is the resource easy to navigate? Are the learning outcomes clear? Are they achieved? Is the information presented in a clear and concise manner? Were the tasks relevant? Did the questions facilitate your learning? What is the most useful part of the resource? What is the least useful part of the resource? Did you feel supported in your learning? Is the resource an effective teaching method? Would you like e-learning to be used as a medium of instruction more often?

Results
Pending

Discussion
The benefits of university departments adopting e-learning are well documented in the literature\(^5-9\). These range from increased retention rates\(^5\), ease of access and distribution\(^6,7\), reduced administrative burden for teachers and ease of standardisation of content\(^11\). Large amounts of information can be disseminated to increased numbers of students at a potentially reduced cost\(^9\).

But what is known of students’ experiences and attitudes when these e-learning resources are introduced? Without feedback from our learners we run the risk of using technology for technology’s sake and allowing the technology drive learning rather than the learner\(^12\). By evaluating the usefulness of e-learning resources once introduced we can determine if the anticipated outcomes were achieved and whether the benefits merit the significant investment of time and money

References:
Innovation and review of the use of the iPad in medical education

S Sinha, S McRobbie, A Meldrum, C Brown
S Sinha, Clinical Lecturer, University of Aberdeen, Room 2.042, 1st floor Polwarth Building, University of Aberdeen, AB25 2ZD smita.sinha@abdn.ac.uk

Background and Purpose
The use of tablets in medical education has been growing steadily as these technologies become ubiquitous in different areas of life. One such brand, the Apple iPad has been extensively utilised in various aspects of the university undergraduate curriculums. Apple now awards institutional excellence for innovation and integration of its technology in undergraduate curriculums. We explored the use of iPads specifically in the undergraduate medical curriculum.

Methodology
A literature search was carried out of Embase, Medline and ERIC to identify relevant articles regarding iPad usage in medical undergraduate curriculums. This identified 35 relevant articles. We also evaluated our own usage of iPads in the field of medical admissions interviews. This is an area which has not been reported before, and thus represents an innovative use of the iPad in a novel approach to admissions processes.

Results/Discussion
The use of iPads in the medical undergraduate curriculum is extensive, ranging from use in OSCE assessments, thus stream-lining the process, as well as the delivery of teaching. Apps can be used to replace existing technologies such as PRS (public response systems).

We also report the findings of our data on the use of iPads in the process of medical school admissions processes; a novel strategy of iPad use, and an area of innovation at the University of Aberdeen.
Resilience has been identified as a quality deemed necessary by those wishing to study medicine and dentistry. No more is this true than when considering medical education in a conflict zone. In January 2015 my husband and I took the decision to take time away from Belfast and to work in Palestine. I was appointed Assistant Professors at the Al Quds University medical school (Occupied Palestine) in August 2015. In October 2015, whilst based in Palestine, violence escalated across the region. The impact on students learning at Al-Quds medical school was particularly pronounced. Violence, transport issues, class cancellations and evacuations of the campus resulted in students facing disruption to their learning. In managing these difficulties, the need to adopt a flexible pedagogy and alter teaching approaches was deemed necessary in order for students to complete the semester. This involved the development of an online portfolio of material, specifically audio lectures and videos. In addition, the use of social media, namely Facebook was used to engage with students both pastorally and in an educational capacity. Facebook became a medium to conduct quizzes, discussions and online tutorials. This paper highlights the methods and techniques to provide education during a period of violence. It discusses the students attitude to these techniques with data collected from questionnaires and will comment on the effectiveness of such practices through analysis of the students grades from assessments completed, both prior to the escalation of violence and during. The paper highlights the importance of online teaching material for those studying in areas of uncertainty and to evaluate ways that such materials can be utilised in similar circumstances where conflict and violence disrupts access to education.
Student experience of e-learning activities in a blended pathology curriculum

Alvi S, Carr NJ
S Alvi, Medical Education Academic Unit, Faculty of Medicine, University of Southampton, Building 85, Southampton, SO17 1BJ, UK

Background:
On-line interactive e-learning activities called Pathology Interactive Practicals (PiPs) are integrated into undergraduate pathology teaching at Southampton. PiPs deliver core material and are followed by supplementary lectures and tutorials. This novel curriculum design aims to enable mastery of core concepts through e-learning before the linked lectures and tutorials, which build on the core teaching delivered through e-learning. A previous study has shown this approach to be popular with students.¹

Our principal aim in this study was to investigate students’ experience of PiPs in learning and understanding pathology.

Methods:
Subjects were medical students in their second to final year at the University of Southampton; 13 students participated in focus groups and 83 students returned questionnaires. Focus groups were audio-recorded and transcribed, then analysed thematically. The results were cross-referenced with qualitative data from the questionnaires. Likert scale data from the questionnaires were analysed by the Mann-Whitney U test.

Results:
Particular strengths identified by students were: explicitly linking PiPs to other teaching activities; the ability to return to the PiPs for revision of core concepts prior to assessments; interactive questions with immediate feedback; and the ability to work at the student’s own pace. Many students said they found the PiPs more useful to their learning than lectures because of the testing of understanding offered by the interactive questions and the ability to review difficult concepts until mastered. Findings were consistent across focus group and questionnaire data. Students enjoyed the on-line activities, and most strongly agreed with the statement that other subjects should introduce similar on-line learning packages. Students who enjoyed the PiPs were significantly more likely to review them before the linked learning activity. Students also felt that keeping the on-line activities short was important, and suggested breaking any lasting longer than half an hour into shorter segments.

Discussion and Conclusions:
An integrated pathology curriculum in which on-line learning delivers core concepts is appreciated by students. They can identify ways in which on-line activities not only help them prepare for assessments but also promote deep learning. Our results are consistent with strengths previously attributed to e-learning,²³ including the ability to proceed at the learner’s own pace, returning to the material subsequently, and interactivity. Keeping on-line activities short and concise is an important feature of e-learning design that was supported by our students. In addition, our students value specifically linking the on-line learning to other activities in this blended curriculum design.

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Pocket personal formulary – developing a customised medical app

P Duvall, L Cocks, J Garner
Contact: P Duvall, University of Liverpool, Cedar House, Ashton Street, Liverpool, L69 3GE

Background and Purpose
The University of Liverpool School of Medicine implemented a new curriculum in 2014. As part of this change process, increased emphasis was placed on pharmacy. This included the creation of a new application for mobile device, devised specifically for medical students. The app was designed principally as a personal learning tool to enhance the standard of prescribing knowledge and as a response to the patient safety agenda within the UK healthcare setting.

Methodology
Following extensive consultation between the MBChB pharmacy lead, the director of Technology Enhanced Learning and the University Computer Services Department, a personal formulary app was developed.

Results
Personal Formulary is targeted at medical students, enabling them to build and curate a catalogue of drug data for both learning and reference purposes. The app comes pre-populated with a core list of “essential medicines” that are commonly prescribed within the Mersey Deanery, each with an editable template. It also enables the user to create and store custom drugs to expand their own Personal Formulary. The user can:

- Annotate core drugs to include details on Class, Mode of Action and Contraindications
- Create new drug entries
- Order by most used / category / custom drugs
- Add audio notes to new and existing drugs
- Export data for use outside the app

This app can be found in the App Store for Apple mobile devices and within Google Play for Android devices by searching for ‘Personal Formulary’. University of Liverpool students can download and install the app for free. When the app is activated it will continue to work on the individual device beyond the point of graduation. This initiative was launched in November 2015 and as of December 1st 2015 there have already been over 500 downloads of the app amongst staff and students in the University.

Discussion and Conclusions
The app has proved to be a popular and useful tool, improving knowledge of the identified core drug list and providing medical student’s with an easy accessible information source as they progress in their careers.

References
What makes good e-learning software? A Medical Student Survey

N Walker, R Bamford
N Walker, Year 4 Medical Student, Faculty of Medicine & Dentistry, University of Bristol, Senate House, Tyndall Avenue, Bristol, BS8 1TH

Objectives
The vast majority of medical schools in the UK today have e-learning tutorials and software incorporated into their regular curricula. It is vital that software designers receive user feedback and students views on e-learning to shape their synthesis.

Methods
A part qualitative, multi-format online questionnaire was published to 100 4th year medical students who have recently been using e-learning for the development of clinical skills at the University of Bristol. Questions explored several topics including what encouraged students to use e-learning tools and students views around virtual patients and the use of animation in e-learning.

Results
42 students completed the survey. Over 68% of students said they found the use of patient avatars in e-learning modules to be either very useful or quite useful and 76% of students found the use of clinical cases to be very helpful. Over 76% of respondents found the use of virtual patients in modules to be either very or quite helpful. Students were encouraged by the easy accessibility of e-learning combined with interactive software and instant feedback and assessment. Some students found their e-learning modules to be too information heavy, taking excessive time to load and being of a poor format.

Conclusions
Bristol medical students value e-learning as both an information source and as a method of assessment and feedback. E-learning designers should continue to develop easy access to software and interaction through clinical cases and animations whilst avoiding excessive information, making tools available in an easy to digest, non-load intensive format.
Why a Core Surgical Trainee Collaborative Chose to Develop e-Modules?

O'Callaghan J, Bamford R, Landon L, Rodd CD, Coulston J, O'Callaghan J, The Severn School of Surgery Core eLearning Working group

Background
Electronic learning in a module format is a progressive educational tool in achieving competencies and establishing core knowledge in surgical training. Trainees are using a greater variety of digital platforms to assimilate knowledge for courses, examinations and for wider speciality reading in addition to the tradition didactic reading material on many curricula. Thus, surgical trainees have become increasingly involved in developing these platforms.

Objective
To establish what factors have led core surgical trainees to undertake and help devise e-modules at this stage in their training programme.

Methods
A questionnaire was constructed and emailed amongst a group of 8 first year surgical core trainees involved in a collaborative project to develop e-modules relevant to the surgical curriculum. Both quantitative and qualitative data was obtained so as to canvas broader viewpoints. All have different specialty and subspecialty interests which helped create a more diverse pooling of opinions.

Results
All 8 members of the e-Module Working group responded to the questionnaire of 11 questions and provided additional qualitative data for their reasons for undertaking this project. Trainees strongly agreed that the motivation for becoming involved in the programme revolved around an interest in developing e-learning materials that were relevant to their own area of surgical interest. A further key motivating factor was professional development and the ability to enhance ones’ own Curriculum Vitae and aide career progression. A supportive environment appeared to be a key factor on trainees decision to become involved with these projects. Free text responses reflected the trainees’ desire to be innovative, creative and to utilise modern technology.

Conclusion
The core surgical trainees in this cohort were motivated by the opportunity to create unique teaching material in an accessible manner for others and continued professional developmental in the teaching aspect of their portfolios. Supporting trainees in developing these programs and advertising the projects ability to enhance career progression are key factors that should be considered when establishing these programs in the future.
Faculty Development
Developing a credential in medical education: consultation results

E. Russ, Research Centre Adminsitrator, CUREMeDE, Cardiff University, 12 Museum Place, Cardiff CF10 3BG. Email: russem@cardiff.ac.uk

Background and Purpose
Credentialing is a new process that has been proposed by the GMC as a means of recognising doctors’ capabilities in specific areas. The process will entail the evidencing and formal accreditation of the knowledge, skills and performance in a defined area. The credential will demonstrate a doctor’s fitness to practice in that area. This development fits with the direction of travel set out in the Shape of Training Review¹.

The Academy of Medical Educators (AoME) is leading on the development of a credential in Medical Education which, as far as we are aware, is the first credential under development. GMC requires that the content, outcomes and assessment methods of each credential are clearly defined. The credential in medical education will demonstrate knowledge in action in the workplace, signalling that the recipient is an excellent educator who uses their knowledge and skills to support patient safety.

Methodology
An online consultation questionnaire was launched on 20/12/15 and widely distributed via the AoME network to those with experience and expertise in medical education. Taking the AoME standards as the starting point for a potential credential, the questionnaire invited respondents to consider one or more of the five domains. Respondents were presented with level 2 standards and asked if there is anything else that characterises medical educator excellence. They then rated the importance of level 3 standards and offered suggestions about what they would use to evidence excellence in that domain. Responses were anonymous.

Results
In three weeks 168 responses were received. Respondents had multiple roles and included managers/leaders of education (n=90), consultants/GPs (n=86); educational supervisors (n=83); AoME Fellows (n=75); clinical supervisors (n=59).

Responses were spread across the five domains: teaching and facilitating learning (n=52); educational management and leadership (n=43); educational research and scholarship (n=30); assessment of learning (n=24); design and planning learning (n=19). In each domain respondents offered detailed suggestions about what characterises excellence and the kinds of evidence that could be provided.

Sixty percent of respondents were interested in pursuing a credential in medical education. The great majority thought that a credential would enhance role recognition (89%), raise standards of medical education (83%) and help career development (83%).

Conclusions
This consultation demonstrates considerable interest in and appreciation of the potential value of a credential in medical education. The credential development will be informed by their insights into the characteristics of excellent medical education and how that can be evidenced.

References
Medical students’ expectations and experience of personal tutoring: a qualitative study.

M Webb, S Smithson,
M Webb, David Weatherall Building, Keele University, Keele, ST5 5BG

Introduction
Medical school can be a challenging environment for students, with stress and health problems among some undergraduates being commonplace. (1,2) Evidence suggests that good pastoral support can alleviate stress and increase resilience and recovery from burnout. (3) Personal tutoring is one example of a number of support services available to medical students. Keele Medical School has a system of personal tutoring in the form of Professional Development Tutors (PDTs). In 2013 the personal tutoring system was changed to include the role of academic appraiser as well as personal development tutor. In order to build and develop the relationship, students are assigned to the same tutor throughout their undergraduate course. This was another change introduced at that time. In November 2015 there were 176 PDTs supporting in excess of 600 medical students. Although previous research has focussed on the development of effective, supportive personal tutoring systems, and a greater awareness of the need for personal tutoring exists, more research is needed to understand the expectations and experiences of students and tutors.

Method
As part of a Masters in Medical Education research project the expectations, experiences and impact of personal tutoring at Keele University Medical School has been investigated. Seven student volunteers representing all five year groups were interviewed using audio-recorded semi-structured interviews and the transcribed results were coded for emerging themes.

Results
The preliminary results of the project indicate a number of important themes in the delivery of effective personal tutoring. They indicate that students value the continuity of the relationship that the new system provides. Emerging themes from the data analysis indicate clear and consistent characteristics and attributes of good personal tutors. Students expressed an awareness of developing professional boundaries and an understanding of how the system integrated into the wider student support services available, describing a process of self-triage in terms of selection of means of support. Uncertainty over the role and the boundaries of both students and tutors had a marked negative impact on the effectiveness of the PDT system.

Discussion
The research links in with results of previous research and reinforced the importance of an effective and matched personal tutor relationship. (4,5) The data will help to strengthen and improve the delivery of the Professional Development Tutor system at Keele but it also has wider implications for other providers of personal tutoring. Further research is currently being undertaken investigating the tutors’ experiences of the system.

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The motivations and experiences of dental clinical teachers attending teacher-training programmes

S R Aljohani
S R Aljohani, PhD Student, King’s Learning Institute, King’s College London, London, UK

Background and Purpose
With the increasing professionalisation of teaching within higher and professional education and calls for educational reforms, dental clinical teachers face the increasing challenges of changing roles and identities during a time of decline in clinical academic dentistry. This research is part of an ongoing PhD study on the professional identities and experiences of dental teachers and educators related to their teaching practices and professional development as educators. In this research, I explore dental teachers’ experiences when attending two teacher-training programmes (academic practice and clinical education). This study will help to advance the understanding of, and provide a framework for, dental teachers’ professional development.

Methodology
Using individual semi-structured interviews, I interviewed 18 dentists who were enrolled in two teacher-training programmes. I recorded their perspectives on their motivations and experiences of professional development as teachers. This study aims to identify themes and sub-themes that may both nurture and impede the development of the teaching identities of dental clinical teachers within different roles and responsibilities.

Results
I found that teacher-training programmes were experienced in various qualitatively different ways. The variations in dental clinical teachers’ experiences highlight the heterogeneity of the dental clinical teacher cohort. ‘Stimulating reflection’ was identified as the main outcome of joining a teacher-training programme. The main challenges were identified in the use of the new language of educational literature. My preliminary results suggest that, although dental teachers engage in relatively similar teaching practices, they may exhibit varying approaches to their teaching practices and development as clinical teachers due to their qualitatively different perspectives on teaching.

Discussion and Conclusions
There were variations in the experiences among dental clinical teachers while experiencing their development as clinical teachers. Tensions and challenges were identified while they were reflecting on their experiences. Common themes emerged from the data that could be highlighted for professional development curricula. Taken together, these findings have important implications for literature on professional education.
Audit of academic poster design at the ASME Annual Scientific Meeting 2015

AA Gopal, MG Redman, DR Cox, D Foreman, E Elsey & S Fleming.
A Gopal, Junior Association for the Study of Medical Education, c/o Association for the Study of Medical Education, 12 Queen Street, Edinburgh, EH2 1JE, UK; hyag1@hyms.ac.uk.

Background
Academic posters are a common means of disseminating information at medical conferences. The aim of a poster presentation is to succinctly communicate key-points to attending delegates or be used as a visual aid during an oral presentation. Both approaches require creative and academic writing skills, with the visual impact of the poster key in stimulating and retaining interest [1]. Evidence also suggests that interest from delegates towards posters is low [2] and therefore a poster’s visual appeal and clarity may improve interaction. Some conferences provide guidance and requirements for the visual presentation of posters. For the Association of the Study of Medical Education (ASME) Annual Scientific Meeting (ASM) 2015, poster abstract guidance was provided. However, guidance with respect to design was limited to layout (size and orientation).

Methods
Six auditors assessed posters displayed at the ASME ASM 15th-17th July 2015 against standards from a modified checklist for academic posters, which was adapted from resources produced by Canterbury Christ Church University [3] and the University of Leicester [4]. A ten point criteria was agreed as assessment standards for the quality of the posters.

Results
One hundred and eighty posters were assessed. Appropriate copyright for materials displayed was present in 29% (n=52) of posters. Suitable contact details were present in 41% (n=73) of posters. 48% (n=87) had a text to graphic ratio of 50:50. 72% (n=130) of the posters met ASME’s guidance for layout and orientation. Appropriate referencing was found in 76% (n=137), whilst evidence of proofreading for grammar and spelling was found in 78% (n=140) of the posters. 79% (n=142) of the posters were readable at 2 metres. Posters were judged to have information signposted in 85% (n=151). Appropriate academic logos were used in 87% (n=156) of posters. 89% (n=160) of the posters used an appropriate typeface.

Conclusions
There was variability in design quality of the posters, as assessed by the criteria. We recommend detailed guidance should be produced for the creation of academic posters and disseminated by the organising conference. This would benefit the personal development of individuals as presenters and aid communication of presented material. We aim to re-audit at the ASM 2016 following production and dissemination of poster presentation guidance.

References:
Developing an Undergraduate SSC in Global Health in Uganda: 3 years on

A Hawkins, DN Majumdar, J Moffat, K Else, M Natarajan, K Jones
DN Majumdar, Assoc. Clinical Teaching Fellow, Undergraduate Academy, Great Western Hospital, Swindon SN3 6BB

Background and Purpose
Medical students in the UK undertake “Student Selected Components (SSCs)” as part of the undergraduate curriculum. It is a period of time where students have the opportunity to choose what they do, whom they work with, and where they work. These are distinct from elective placements because the students are required to produce a piece of academically rigorous work as well as gaining clinical experience. SSCs are an integral part of the curriculum: they enable students to study a subject of particular interest to them in greater depth, to develop research skills and to facilitate individualised personal and professional development. An appreciation of healthcare in low resource settings is of significant value to the undergraduate as is emphasised in the GMC document “Tomorrows Doctors”. In 2012 at Swindon Academy, we developed a successful global health SSC programme in Uganda. In the years since its inception, we have expanded the course and took 20 students in 2014. Students now undertake projects in Obstetrics, Women’s Health, Paediatrics, Anaesthetics and Surgery. The purpose of this submission is to describe the process of setting up a global health SSC project and to evaluate our experiences of running this SSC through analysis of student feedback.

Methodology
We provide a step-by step guide to establishing a global health SSC programme in the developing world. Feedback from students was collated using questionnaires. Questions were asked on a semantic differential scale of 1-10 and analysed using descriptive statistics. Qualitative data was collected using free text boxes and thematic content analysis was performed.

Results & Discussion
All students’ self-assessed knowledge of global health issues increased following the SSC. Feedback suggested the SSC was well organised, enjoyable and a valuable addition to the medical student experience. Key themes in qualitative analysis were improved understanding of global health issues, improved confidence in carrying out a research project, improved communication skills, depth of understanding and improved clinical skills. There are many lessons to be learned when implementing a program such as this, and we have had to overcome logistical and financial obstacles. But the result has been the formation of a valuable link with two Ugandan hospitals and a popular addition to the undergraduate experience.

References
Interprofessional Education
A Pilot Approach Using the Dissection Room in Operating Practitioner Department Student Gastrointestinal Anatomy Teaching

S Vitello, A Bonfield, V Chillal, S Richter, A Gulley
S Vitello, Honorary Clinical Demonstrator, University of Leicester Medical School Department of Medical and Social Care Education, 107 Princess Road East, Leicester, LE1 7LA

Background and Purpose
It is important for operating department practitioners (ODP) to understand anatomy and be able to identify and locate key structures in theatre. We designed a pilot one-day programme using the dissection room to complement gastrointestinal (GI) tract teaching for first year Operating Department Practitioner (ODP) students.

Methodology
The pilot was a one-day programme designed by four junior doctors. 28 first year ODP students attended. The programme consisted of a journey of a ‘hamburger’ through the GI tract using a prezzie presentation. At four points along the GI tract, we stopped the ‘hamburger’ and we discussed the organs from a structural and functional perspective and included clinical applications. After each of the four discussions, we divided the students into four groups, each around a different cadaver. A junior doctor facilitated each group’s exploration of the cadaver and showed the key organs according to the presentation. The students rotated around each cadaver in order to appreciate different anatomical variation. The students completed a questionnaire at the end to evaluate the programme.

Results
27 students strongly agreed that the session was beneficial. 28 agreed or strongly agreed that the content taught was relevant to the course. 25 disagreed or strongly disagreed that the content was overwhelming. 28 agreed or strongly agreed that they felt more confident locating key organs in the abdomen after the course. 27 noted that the level of detail and content taught was just right. 1 found the content too simple.

Discussion and Conclusions
ODP students found the dissection room beneficial as a means of complementing GI tract anatomy teaching. Using cadavers to illustrate anatomy and function improves confidence when identifying structures and enables anatomical variation to be appreciated. Using junior doctors to design and facilitate these sessions also introduces the concept of inter-professional relationships early on and the results demonstrate junior doctors can design a course at an appropriate level of detail for students of other healthcare professions.
Great minds, but do we all really think alike?

YYS Ho, D Morton, H Chant, N Oxlade, L Crossland, C Earnshaw, Z Hossenbaccus, P Fletcher, P Bianchi, CD Rodd.
YYS Ho, Redwood Education Centre, Gloucestershire Royal Hospital, GL1 3NN

Background and Purpose
It is well recognised that a multi-disciplinary team must function effectively to deliver optimal patient care. Universities across the globe have incorporated inter-professional education (IPE) into their curriculum.¹ Parsell suggested that IPE for healthcare students could reduce prejudices towards other healthcare professionals by increased understanding of different roles.² With the growing emphasis on IPE, it is important to explore the different perceptions that may exist between pre-registration pharmacists, nursing and medical students. Currently, there are limited studies on the perceptions of different healthcare students on patient care. Harsburgh reported medical, nursing and pharmacy students had different attitudes towards how clinical work should be carried out.³

The aim of this study is to explore whether there are any similarities or differences in perception between pre-registration pharmacists, nursing and medical students on end of life care issues and roles of different members of the multi-disciplinary team.

Method
Twenty-eight pre-registration pharmacists, 2nd year nursing students, and 5th year medical students based at Gloucestershire NHS trust attended a simulation session on issues relating to end of life care. Each group of participants received two scenarios with a faculty member portraying as a patient’s relative and a patient simulator ‘Hal’ (Gaumard). The scenarios involved pain management, use of anti-emetics, agitation and excess secretions treatment in palliative care. Ethics approval has been granted to perform this study.

Written consent was obtained from the participants. All participants had five minutes at the end of a scenario to document the events, as if recording in a patient’s notes. Discourse analysis will be used to analyse the documentations and the results will be shared with the participants for further discussion. Pre- and post-simulation evaluation forms will assess whether IPE simulation training enhanced awareness of their own and other professional roles. A 4-point Likert scale and free text boxes was used. Facilitated debriefing discussed any misconceptions regarding roles and perceptions of roles into further detail.

Results
The results on the perceptions of events and professional roles will be presented.

Discussion
Rudland et al suggested students entering medical school had already stereotyped doctors and nurses roles.⁴ In a qualitative study, Oberle et al found there were differences in the doctors and nurses perception of ethical dilemmas in end of life decisions.⁵ Identifying the possible similarities and differences in perceptions and attitudes of event and each other among the students may result in enhanced team working.

References

281
Passing the PSA: An emerging role for pharmacists in medical education?

L Cocks
L Cocks, Royal Liverpool University Hospital, Prescot Street, Liverpool, L7 8XP

Background and Purpose
From 2016, all F1 doctors are expected to pass the Prescribing Safety Assessment (PSA) before starting at their foundation schools. The aim of the PSA is to assess the core prescribing competencies that are required of newly qualified doctors outlined in Outcomes for graduates¹.

Methodology
A practical prescribing programme led by a Medical Education Pharmacist was developed for fourth year medical undergraduates at the University of Liverpool. This focussed on the core competencies identified by the General Medical Council in preparation for the PSA and becoming an F1 doctor¹,². The programme included a range of lectures, workshops and ward based activities that covered the high risk drugs assessed in the PSA (anticoagulants, antibiotics, insulin, opiates and fluids).

Results
Initial feedback has demonstrated that medical undergraduates find this type of teaching a vital component of their prescribing education and preparation towards becoming an F1 doctor. Full results and recommendations arising from the course evaluation will be presented.

Discussion and Conclusions
Medical undergraduates were often previously expected to develop the core knowledge, skill and clinical judgement that prescribing encompasses in a restricted amount of time without sufficient opportunity to practice their skill and obtain appropriate levels of feedback.

Despite the fact that pharmacists possess an unparalleled skill set in relation to medicines management, the profession was previously under-utilised in the development of undergraduate training programmes involving safe and effective prescribing. However, as there is now a greater emphasis placed upon the importance of multidisciplinary learning with an increased focus on prescribing and patient safety, it seems logical that the role of a pharmacist within medical education should be re-evaluated.

References
Post-graduate Nephrology Nursing Simulation Training

K Gulati, M Antonelou, C Hill, A O’Riordan, B Fernando
K Gulati, Royal Free Hospital, London, UK

Background and Purpose
Simulation training has become an invaluable education tool, and incorporated into many undergraduate nursing curricula\(^\text{1}\). We developed a high-fidelity simulation course for post-graduate renal nurses and health care assistants (HCAs) working in a tertiary renal unit to develop knowledge, skills and attitudes in managing renal emergencies.

Methodology
We held 3 separate 3 hour courses for nurses of different banding grades based on the acute renal wards, outpatient departments and dialysis satellite units. There were 5 facilitators in each course, consisting of nursing and medical simulation leads, junior doctors and renal specialist nurses. The simulation courses consisted of four 10 minute scenarios, followed by a 20 minute debrief. Scenarios were curriculum mapped and based on commonly encountered renal emergencies on the wards and outpatient settings. Qualitative and quantitative data was collected using pre- and post-course feedback questionnaires (Likert scale 1-6). Following the course, a facilitator debrief was held.

Results
There were 22 participants: 7 band 5 nurses, 10 band 6 nurses and 5 HCAs. Only 4 of the candidates had previously participated in simulation training. The median education value as reported by all participants was 6/6.

![Graph 1](image)

Graph 1: Graph showing change in confidence in various skills (mean confidence on Likert scale, 1 - 6) pre and post simulation courses as divided by different levels of nursing training.

Free text feedback included wishes for further inter-professional involvement. The role and content of facilitation varied significantly depending on the level of nursing grade. There was a high level facilitator involvement and low level participant lead in the junior nurse and HCA debrief, focusing around acquiring specialist knowledge and technical skills. In the debrief of the more senior nurses, there was high level facilitation with more participant lead and low faculty lead, focusing on non-technical skills and correlation with experience encountered in their practice. The facilitator debrief also noted that there was increased receptiveness to facilitation by more junior nurses.

Discussion and Conclusions
There was an improvement in confidence in skills in all levels of nursing. Participants identified the course as an important training tool as well as a forum for reflective learning in higher training grades. There is a clear need for introduction of simulation early in the nursing education curricula to break down barriers to effective inter-professional communication and team working by providing a safe learning environment.

References
Profession Specific Learning Objectives within Inter-professional Education (IPE) Improves Multi-Disciplinary Team (MDT) Perceptions and Collaborative Team Work

C Ratneswaran, D Vamathevan, J Mushtaq, TK Khong
C Ratneswaran, St George’s, University of London, Tooting SW17 0RE

Background and Purpose
No unified approach to IPE within healthcare exists. Generally, all professions involved share similar learning tasks and objectives. We hypothesised that profession specific learning objectives within IPE positively impacts on teamwork, collaboration and MDT perception.

Methodology
An inter-professional 3-day history taking course was established within an MPharm curriculum. Following a 2 hour ‘OSCE and teaching skills’ training session for final-year medical students (MBBS5, n=28) and a ‘history-taking’ lecture to third-year MPharm students (n=121), MBBS5 led on small-group MPharm history taking practical sessions (180 minutes). The Readiness for Inter-Professional Learning Scale (RIPLS) and Inter-professional Educational Perception Scale (IEPS) were administered to participants before and after the course.

Results
MPharm RIPLS total was 75.8±9.8 before and 80.8±9.0 after the session (p<0.0001); the sub-sets for ‘team-work and collaboration’ and ‘professional identity’ were 38.0±5.4, 27.0±4.8 before and 58.8±8.5 (p=0.0001), 28.7±5.2 (p<0.05) respectively, after the course. IEPS total was 77.8±19.0 before and 82.4±14.8 afterwards (p<0.01); sub-set scores for ‘perceived competency’ and ‘perceived need for co-operation’ were 21.2±5.5, 8.3±2.6 before and 22.8±4.6 (p<0.01), 9.4±2.1 (p<0.01) after the session. Total MBBS5 RIPLS (74.2±9.7 vs 76.8±10.2, p<0.05) and IEPS (78.1±11.3 vs 82.0±10.3, p=0.05) were similarly greater after the course, compared to before.

Discussion and Conclusion
A focussed IPE session where final-year medical led 3rd-year MPharm students on an expected MBBS5 minimum competence, improved all subsets of inter-professional learning, team working, collaboration and positive views of their own and others’ profession. Profession specific learning within IPE can facilitate both shared and importantly, profession specific objectives.
Signing up to safety: Use of multi-disciplinary ward-based simulation to enable healthcare students to learn about patient safety

Taylor I, Hollamby J, Berragan E, Morgan J.
I Taylor, Clinical Teaching Fellow, Bristol University Medical School, North Bristol Academy, Southmead Hospital, Bristol, BS10 5NB

Background and Purpose
There is increasing recognition that patient safety needs to become an integral part of teaching for healthcare undergraduates. However there is evidence that healthcare students lack awareness of patient safety issues, and this may be contributed to by inadequate exposure to such incidences during their clinical placements. Simulating a busy ward environment has been shown to be an effective way of teaching undergraduate healthcare students. By getting healthcare undergraduates to work together in a simulated ward-setting you can improve communication and team working, which in themselves are recognised as important facets in the approach to improving patient safety. Our aim is to introduce some common patient safety issues into a busy simulated ward, to allow our students to experience them first hand and begin to understand how they might manage such situations.

Methodology
138 final-year medical, nursing and pharmacy students in groups of 18 will be involved in a simulation of an 8-bedded medical ward. There will be a range of tasks to complete, designed to mimic activities that the students would encounter in a real clinical setting. There will be a number of patient safety issues for the students to recognise and address, for example drug dosing errors and wrong-site nasogastric tube insertion. At the end of each scenario, there will be an opportunity for feedback and debrief. The students will be encouraged to identify the real and potential patient safety issues and a subsequent discussion will highlight how these arise in clinical practice and how they can be mitigated. Students will be surveyed about their awareness and understanding of patient safety both before and after each session and about how the session will influence their future practice.

Results
The simulation sessions will be conducted throughout January – March 2016. Results to follow.

Discussion and Conclusions
We propose that use of a simulated ward environment, involving undergraduates from a range of healthcare backgrounds, can be an effective way of teaching the relevance and importance of patient safety. Our aim would be that they not only have a better understanding of some common patient safety issues but they also feel more confident in how to address them in a clinical context. Additionally we would expect that the students would feel more confident working alongside fellow healthcare professionals after the simulation, and that this would have benefits for better team-working and improved patient care.

References
The UCL Pre-Hospital Care Programme – Novel education for the modern doctor in training

S Bulford, M Clear-Hill
S Bulford, Honorary Clinical Teaching Fellow, School of Medicine, University College London, Gower Street, London WC1E 6BT

Background
University College London (UCL) medical school has introduced a new curriculum\(^1\). Designed to train a modern doctor, this curriculum afforded interested parties the opportunity to offer new and varied clinical placements. Elsewhere in the UK, the post-graduate specialty of pre-hospital emergency medicine was hosting its first senior registrar trainees\(^2\). These two factors inspired a group of medical students to formulate the UCL pre-hospital care programme – a series of five student modules which run within the main medical school curriculum.

Methods
Applicants underwent interview before successfully joining the programme. Prior to programme activities, students completed a quantitative and free-space questionnaire. Programme activities included observer shifts with allocated mentors from our training partners, the London Ambulance Service and the Wembley National Stadium medical team. Students also attended monthly academic forums and clinical skills evenings, both of which hosted by external pre-hospital clinicians. In addition, students completed a reflective log and an extended academic essay. All programme components were entirely supervised by fellow students. At the end of the programme, students completed an identical questionnaire.

Results
Students felt overwhelmingly positive about their time spent on the programme. Questionnaire feedback demonstrated an increase in confidence when communicating with both patients and fellow professionals, and that students learnt about effective and less effective communication styles. This feedback also demonstrated that students learnt about the strengths and limitations of their pre-hospital colleagues, and about the journey a patient may embark upon when unwell. Students stated that their professional behaviours changed to become increasingly collaborative and holistic regarding their contribution to the inter-disciplinary, and indeed they developed a positive sense of professional identity. Finally, students felt that exposure to pre-hospital care should be a mandatory part of the curriculum and that this type of programme confers tremendous value to every medical student.

Discussion
The results demonstrate that this student devised and led, novel educational intervention confers great value to the training doctor. This echoes previous examples of similar pre-hospital student involvement\(^3-5\). In the future we hope to ascertain how students perform in OSCE examinations compared to their peers. We also hope to interview past students so as to gauge how participation in the programme has affected their later clinical practice. We believe consideration should be given to increased pre-hospital care student opportunities and we believe the UCL programme offers a sustainable, replicable model in order to do so.

\(^1\) https://www.ucl.ac.uk/medicalschool/staff-students/mbbs-new-curriculum, last visited 15/10/2015
\(^2\) http://www.ibtphem.org.uk/IBTPHEM/Recruitment/Recruitment.html, last visited 15/10/2015
\(^4\) Dickinson, WW. Pre-hospital trauma management. Accident and Emergency Nursing. 1994; 2: 2–6
\(^5\) Ivanov, T. What is the role of the clinical instructor and clinical placements for student ambulance paramedic training? Faculty of Education Melbourne, Deakin University, 2005. Master of Professional Education & Training
Using flow charts to understand diagnosis and management in an acute presentation with multi-organ involvement

S Herbert, P Boddana
S Herbert (Medical Student), Faculty of Health Sciences, First Floor South, Senate House, Tyndall Avenue, Bristol, BS8 1TH

A 52-year-old man presented 2 weeks after a long haul flight with a four-day history of gradually worsening breathlessness and flu-like symptoms. The patient had a CTPA, which confirmed the diagnosis of pulmonary embolism, and was treated appropriately. This seemingly uncomplicated patient then developed left iliac fossa tenderness and his blood tests confirmed Acute Kidney Injury stage 3 (AKI). CT scan of abdomen revealed left renal infarction.

Two days later, the patient appeared confused and demonstrates signs of expressive dysphasia. CT scan of brain showed left middle cerebral artery ischaemic stroke. Amongst all of this, the patient was admitted to ITU for his declining state.

Clinicians were concerned for the increased thrombo-embolic state and completed full autoimmune serology, bacterial and viral screens, which were subsequently negative, and quickly inserted an Inferior Vena Cava Filter to prevent further ischaemic events. The presence of both pulmonary and systemic emboli revealed the possibility of a shunt within the patient, leading to a transoesophageal echocardiogram revealing a Patent Foramen Ovale (PFO) with a right to left shunt.

Understanding the sequence of events for this patient is complicated by written note entries from multiple clinicians, the complexity of the case and the vast number of diagnoses. The challenges of diagnosing, managing and explaining the case to other clinicians and students can be simplified by the use of flow charts.

An extensive search was carried out on the patient’s notes and scan reports to collect all information on the admission and time course of events. Using Microsoft Flow Chart generator, a document was created highlighting the presentation and complexity of the case.

The flow chart is a visual representation of the patient’s journey and demonstrates how complicated cases can be broken down. It easier for diagnostic purposes, explanation to further carers of the patient, and to understand why certain clinical decisions were made. The benefits of the flow chart are also for teaching purposes as it simplifies the case allowing understanding of the pathological process taken place.

In conclusion, flow charts can be a simple, effective and aid in communication of thoughts, ideas, and quick way to grasp and learn from complicated cases. They can be of value in the process of diagnosis and helps to clarify complex process, delays duplication of tests and referrals resulting in continuing care in addition to education and teaching as it identify problems and focus discussions.
Educating our Patient Volunteers – The Development of an Information Afternoon for Volunteer Patients

CL Sharratt
CL Sharratt Nottingham University hospitals Trust, City campus, Hucknall Rd, Nottingham, NG5 1PB

Introduction
Nottingham University Hospitals (NUH) Trust has a large undergraduate education department, which is supported by a database of over 200 volunteer patients. Patients wishing to volunteer complete induction paperwork with a faculty member, to include relevant clinical history and signs. Consent for particular examinations is also obtained. No formal induction or training is provided. A Medline search for the terms “volunteer”, “patient” and “education” identified articles referring to the training of simulated patients\(^1,2\), but few relevant to volunteer patient training\(^3\). Evidence in the published literature about “real” patients’ knowledge, skills and attitudes to partaking in medical education reflects mostly the general practice setting\(^4\). Qualitative research from Howe et al \(^3\) recommends increasing partnership with staff and students, providing information and feedback and ensuring appropriate consent is obtained\(^3\).

Methods
Invitation letters to an information afternoon in January were sent to all patients on the NUH database. To date, we are expecting approximately 100 attendees. A three hour programme will deliver an overview of the 5-year medical curriculum, a review of the clinical phases and how the NUH teaching department integrates into this, and information about the various roles our volunteer patients undertake. The afternoon also includes a Q&A session from lead consultant and nurse educators, teaching fellows, final year medical students and volunteer patients. Learning objectives include understanding the medical degree structure, stages of clinical training and aspects of training volunteer patients are valued for. It also provides an opportunity for our volunteer patients to network, share ideas and experiences and expand their volunteer opportunities. For the department it is an opportunity to thank and acknowledge our patients’ support.

Results
This abstract will include summary data from the meeting including response and development suggestion feedback from the attendees. Pre and post meeting evaluation forms will identify any knowledge acquired or change in attitudes following the meeting. The data collected will be used to develop future opportunities for our volunteer patients.

Conclusions
Future plans following the meeting include arranging further update meetings for our volunteer patients, and writing an information booklet to be distributed to all new volunteers. The authors hope this initiative will provide a gateway to a longer term education initiative for our volunteer patients, increase cohesion between patients and faculty, and provide an understanding of patients’ needs within the department. The author is considering further qualitative research into the knowledge, attitudes and skills of volunteer patients.

References
Parent opinion on Multi-disciplinary In-situ Simulation as Paediatric Emergencies Training

C Junk, C Hart, T Bourke, A Thompson.
C Hart, Clinical Fellow in Education and Simulation, Royal Belfast Hospital for Sick Children, 180-184 Falls Road, Belfast, BT12 6BE.

Background and Purpose
As a tertiary paediatric unit we conduct unannounced multi-disciplinary high fidelity in-situ simulations. Team feedback has questioned how mock emergencies affect parents and children on the wards. A previous small scale study addressing this issue in a paediatric intensive care unit revealed that overall parents felt simulations should occur in this environment. They also reported a mild increase in anxiety\(^1\). In order to enhance our simulation programme and support families we have evaluated parental attitudes to ward-based simulated emergencies.

Methodology
Forty-one parent questionnaires were completed rating how strongly parents of inpatients agreed to statements about medical and nursing staff receiving training in managing emergencies. They were also asked how they and their child would be affected if this practice happened on the ward. Comments were gathered and on collection of the forms parents’ questions were answered. A nurse and doctor involved in simulation distributed the questionnaires over two afternoons and explained the concept of in-situ simulation to parents beforehand.

Results
All parents who were approached agreed to participate. Only 20% of parents whose children had one admission thought in-situ simulated emergencies would be distressing, as opposed to half of those whose children with over 10 admissions. One parent felt ‘it would be stressful, but also necessary’. Almost all parents of children with a single admission, and 75% of those with ten or more admissions, agreed that practicing for emergencies on the ward should be done even if it caused disruption. 95% of parents felt more confident in the team knowing this practice occurs, describing it as ‘reassuring, essential’. Communication was a key issue for parents. One parent stated that ‘to be aware they could happen at any time would be enough for me not to become distressed’. Parents suggested providing an information leaflet on admission to prepare them for possible in-situ simulations and to ‘have a quiet word in surrounding relatives ear’ to inform parents and reduce distress.

Discussion and Conclusions
This survey provides valuable insight for those developing an in-situ simulation programme. Parents appear keen for ward-based training in paediatric emergencies; ‘further training will only benefit my child’. This was even if there might be disruption and some distress generated, provided they were well informed. We are incorporating the parent suggestions into our simulation programme and aim to prospectively gather parental opinion post-simulations.

References
Patient Perceptions of Medical Students in Gynaecology Clinics

Tyler A, Hodge F, Kevelighan E & Gasson J
A Tyler, Teaching Registrar, Dept. Obstetrics & Gynaecology, Singleton Hospital, Swansea, SA2 8QA

Background
Gynaecology is an intimate speciality where respect, confidentiality and consideration are essential features. Clinical exposure to gynaecology patients and examinations is an essential part of the undergraduate medical curriculum. Patients are generally happy to be involved in student training; however their acceptance of student practical involvement varies (1). Male students are more likely to perceive gender bias (2) and also more likely to struggle as women may be less likely to accept them in intimate examinations as suggested in obstetrics during labour (3).

Following the introduction of a teaching registrar to the obstetrics and gynaecology department within our hospital in September 2014 specific teaching clinics were introduced where the student is supervised to perform the entire consultation including a full examination in gynaecology clinic (which usually includes a speculum and internal examination). Patients that have attended these clinics have been satisfied with their care and 92 percent of patients seen would be happy to be seen in such a clinic in the future (4). The gender bias has anecdotally not been observed within these clinics; however these patients are a self-selected group as they have already agreed to be seen by the students. Therefore we wish to further explore the views of all women attending our gynaecology clinics.

Method
All women attending gynaecology clinics in Singleton Hospital from September 1st 2015 were invited to complete a paper questionnaire asking for their views on medical students’ presence and roles within the clinics. Those women who had medical students present during their consultation were also given a post-consultation questionnaire.

Results
The provisional data from the first 2 months data collection suggests 78% of respondents felt positively towards medical students. 90% felt the sex of the student did not make a difference. Only 2% would not be willing to have their history taken, or have their abdomen examined, compared with 48% declining to consent to a student performing an internal pelvic examination. The full data set will be complete by July 2016.

Discussion and Conclusions
The idea that male students may be less acceptable to patients than their female counterparts is not supported through this study so far. With the complete data set, we aim to be able to gain more insight into why some patients would not be happy to be examined internally and intend to propose methods to improve participation and acceptance therefore improving both student and patient experience.

References:
Postgraduate Education
Background and Purpose
Gender Mainstreaming is mandatory within the European Union for state Universities and the health system. We think that Gender and Gender Medicine have to be included in all our curricula at the Medical University of Innsbruck, Austria. To get Gender Medicine into medical research it is essential to include it in all curricula offered at medical universities. It must also be included in the core curriculum of all study phases and in all cumulative examinations. So it will become the status quo for all medical students.

Methodology
All instructors are asked to include Gender aspects in their course material and exams and are given a booklet on the subject. Gender Medicine is instructed in the core curriculum twice: in the third semester the fundamentals of Gender Medicine, and in the tenth semester its clinical and research relevance. This material is also covered in the two cumulative exams. Gender Medicine was recently established as a compulsory subject in the PhD-programme. One Gender aspect must be elaborated from the PhD-thesis with subsequent congress presentation or publication of a scientific paper. There is a compulsory course prior to applying for venia docendi.

Results
We started in 2013. Until now more than 150 diploma-theses and 30 PhD-theses were registered on the subject, and 5 poster prizes were awarded at national and international congresses for PhD-Gender-posters.

Discussion and Conclusions
To get Gender and Gender Medicine into medical research they must already be included in the core curriculum if they are to be considered a "normal" subject. Another important factor is to emphasize the usefulness of Gender-Medicine-findings with regard to research possibilities, project applications, grants and resources. We hope that being forced to include Gender aspect in their PhD-theses will help them to get used to it and they will do it also in future projects.
A Case controlled study to evaluate the effect of an enhanced induction day on the preparedness of Foundation Year 2 doctors starting their O&G attachment.

S Zaher, Clinical Lecturer in Obstetrics & Gynaecology and Senior Speciality Trainee, Institute of Medical education, Cardiff University, Heath Park, Cardiff, CF14 4YU.

Background and Purpose
In the United Kingdom, newly qualified doctors are enrolled for two years in Foundation Training. Currently Foundation Year 2 (F2) doctors can choose to have a 4 month rotation in Obstetrics and Gynaecology. Despite the expectation of the General Medical Council that students on graduation (and therefore on entry into Foundation Training) are competent at performing pelvic examinations (1), there is evidence that students on graduation may have had little or no opportunity to practice the pelvic examination and may feel neither competent nor confident about these skills (2).

F2 O&G doctors will be expected to take histories, perform pelvic examinations and explain potentially distressing diagnoses.

Typically an Obstetrics and Gynaecology rotation will start with an induction day, which involves no training on undertaking pelvic examinations and no checks of the trainee’s competency at this complex skill.

The objective of this trial is to evaluate the effectiveness of an enhanced induction programme, comprising a GTA (Gynaecology Teaching Associate) session and a communication skills workshop on the preparedness of foundation doctors starting their O&G post. The GTA session reviews the skills for the pelvic examination using a healthy woman who consents to the pelvic examination and is trained to give feedback.

This study proposes to determine if having an enhanced induction significantly improves the confidence and preparedness of F2 doctors at the start of their O&G attachment. In addition we wish to study the potential wider benefits of the enhanced induction and in particular whether this leads the trainees to perform more pelvic examination during their attachments and whether it makes them more likely to consider Obstetrics and Gynaecology as a career choice.

Methodology
F2 doctors starting an O&G rotation, will be recruited to the study. Trainees in south Wales will be offered enhanced induction days. The control group will be trainees in the rest of Wales, who will receive routine induction days. Qualitative and quantitative data will be collected longitudinally throughout the rotation.

Results
Initial pilot studies reveal that F2 doctors feel ill-equipped for starting their O&G post. Initial data post the enhanced induction day shows a perceived increase in confidence and preparedness for starting the post.

References:
Background
We have developed a self-assessment skills workshop for foundation trainees. The workshop consists of a series of activities designed to raise trainees’ awareness of self-assessment as an educational development technique and incorporates a toolkit of self-assessment methods which they may wish to try.

Methodology
We have trialled a pilot version of the workshop with 14 foundation year two trainees at a teaching hospital in the North West of England. Pre- and post-workshop surveys were conducted in order to understand the participants’ attitudes towards self-assessment and to gauge their reactions to the workshop. We conducted a further survey six weeks after the workshop to assess whether the participants had used any of the self-assessment methods promoted in the toolkit and to see if there were lasting changes in their attitudes towards self-assessment.

Results
All surveys used five-point Likert (1) rating scales in which a score of 1 indicated strong disagreement with a statement while a score of 5 indicated strong agreement. Prior to the workshop participants were unclear about what self-assessment entailed (mean rating 3.5) and were uncertain if good self-assessment skills were important to them (mean rating 3.8). Following the workshop these mean ratings changed to 4.7 and 4.5 respectively. There was uniformly positive feedback for the workshop (mean rating 4.5) with some participants regretting that it had not been delivered earlier in their foundation training. All participants expressed an intention to make use of the suggested self-assessment techniques in the future (mean rating 4.5).

11 out of 14 (79%) participants responded to the six-week follow-up survey. 82% of respondents reported that they had made use of one of the twelve self-assessment techniques discussed in the workshop. Respondents continued to report an improved understanding of what self-assessment entailed (mean rating 4.1) and an ongoing opinion that good self-assessment skills were important to them (mean rating 4.2).

Conclusions
We conclude that a workshop-based intervention may be an appropriate way to introduce the concept of self-assessment during the early stages of post-graduate medical training. Such a format appears to create lasting changes to trainees’ professional development behaviours.

References
1 Likert, R. A technique for the measurement of attitudes. Archives of Psychology. 1932;140:1-55.
ADEPT - The inaugural journey of the Clinical Leadership Fellows

J Courtney, G Donaghy, K Gardiner, R Hutton, G Lewis, L McLaughlin, L Meghey, J Reid, N Thompson, L Damkat-Thomas
R Hutton, ADEPT Clinical Leadership Fellow, ST5 Urology Trainee, Health and Social Care Board, 12-22 Linenhall Street, Belfast

Introduction and rationale
There is increasing emphasis on the importance of engaging clinical staff in leadership and developing leadership and quality improvement (QI) skills for all doctors. Research demonstrates the link between engaging clinical staff to develop leadership capability and better outcomes and better care for patients. Leadership is ‘the art of motivating a group of people to achieve a common goal’ (King’s Fund 2012). Northern Ireland Medical and Dental Training Agency (NIMDTA) has launched, in partnership with other Health and Social Care bodies, a novel scheme for trainees: the ADEPT (Achieve, Develop, Explore Programme for Trainees) scheme.

ADEPT
The ADEPT scheme enables senior trainees in Northern Ireland to develop the organisational and leadership skills necessary to undertake future roles as clinical leaders. Trainees work on projects in an apprenticeship model with senior leaders in DHSSPS and HSC for one year (NIMDTA 2015). By working with leaders and managers to understand their strategic visions of health and social care in the region, and the factors that influence this strategy, they can identify, develop and explore the effective leadership and management styles that achieve results. ADEPT also enables trainees to appreciate first-hand the relationship between clinical practice and service management. By thinking differently using reflective practice, gaining practical leadership and management experience, and leading on a number of QI projects, Fellows have the opportunity to work with senior colleagues facing similar challenges.

Leadership Development Programme
Alongside their supervised role in host organisations, the Fellows participate in a Leadership Development Programme through the HSC Leadership Centre. Coaching and mentoring sessions, host organisation insight visits, and completion and presentation of a QI project complement the attainment of a Level 7 Certificate from the Institute of Leadership and Management.

Discussion and Conclusion
Fellows have been able to develop both their personal and professional skills during project work, and have gained a much deeper understanding of the health and social care system as a whole. They have been encouraged and enabled to build professional networks to draw on the skills and expertise of others. Host organisations have maintained an open door policy, enabling real time insights into the complexities that senior clinical leaders face on a daily basis. Trainees on the front line are well placed to display leadership by identifying problems and implementing solutions (Lemer C, 2013). The Keogh Review (Keogh, 2013) states that doctors in postgraduate training ‘must not just be seen as the clinical leaders of tomorrow, but clinical leaders of today’. Clinicians are ‘potentially our most powerful agents for change.’

References
An Exploration of Foundation Year Doctors' Experiences in the Care of the Dying.

S Gajebasia, J Pearce, M Redman, M Johnson and G Finn
S Gajebasia (Academic Foundation Year 2 Doctor, Hull York Medical School, John Hughlings Jackson Building, University of York, York, North Yorkshire, YO10 5DD; sareena.gajebasia@nhs.net)

Background and Purpose
Foundation Year Doctors care for patients who are dying as part of their daily responsibilities of looking after patients on a ward. It has been stated that during a doctor’s first year of practice 40 of the patients they care for die.¹ However, Foundation Year 1 Doctors have reported not feeling prepared to care for dying patients.² Care of the dying is featured in the Foundation Programme Curriculum³ that Foundation Year Doctors follow yet learning needs have been identified in this area.⁴ The General Medical Council have recognised the importance of good care for dying patients⁵ and the Leadership Alliance for the Care of Dying People have published ‘Priorities for Care of the Dying Person’⁶ which outlines five areas to be addressed by the healthcare team when looking after a dying patient in order to provide good care. This study aims to explore the experiences of Foundation Year Doctors in caring for the dying, using the published ‘Priorities for Care of the Dying Person’⁶ as a conceptual framework.

Methodology
This is a qualitative study, using a modified grounded theory approach. Foundation Year 1 and 2 Doctors from the North Yorkshire and East Coast Foundation School at five different sites within the Foundation School will be invited to participate in the study. Ethical approval has been granted by the Hull York Medical School for this study. Semi-structured focus groups and interviews will be used to explore our three over-arching research questions: 1. What are the Foundation Year Doctors’ experiences of caring for the dying? 2. What training did the Foundation Year Doctors have and how well did it prepare them? 3. What areas do the Foundation Year Doctors identify as areas they need immediate training or support with?

Results
Results, including key themes and exemplary quotes, will be presented, links to policy will be demonstrated and areas of training needs highlighted.

Discussion and Conclusions
Given the importance placed on good care for dying patients and the frequency with which a Foundation Year Doctor may look after patients who are dying it is important to explore these doctors’ experiences of caring for dying patients and identify their training needs. It is hoped that the results of the study will help inform ways in which Foundation Year Doctors can be better prepared and supported to deliver high standards of care to dying patients.

References
Applying academic expertise to practical problems in general practice training – outcomes from the Australian General Practice Training programme’s Education Research Grants

S Wearne, L Stone, N Pollock, J Anastasiou, J See
S Wearne, Senior Medical Adviser, Health Workforce Division, Department of Health, Scarborough House, Woden, Canberra, ACT 2606, Australia

Background and purpose
General practice (GP) registrars learn by working as general practitioners whilst being supervised by accredited GP trainers. This practical experience is supplemented by other educational activity such as personal study and reflection, tutorials and group workshops. This training system ‘works’ but increasing numbers of medical graduates has created extra demand for GP training places and a need to improve both efficiency and the effectiveness of the Australian GP training programme. Competitive research grants were established to enable current educational practices to be questioned and alternative methods of training to be trialled. Applications were called from general practice training providers working in collaboration with academic institutions. This paper will summarise the outcomes of the first three years Education Research Grants programme in Australia.

Methodology
A retrospective analysis of the applications, topics, and outcomes as determined by academic publications and changes to educational practice.

Results
Evidence will be presented on how the Education Research Grant programme led to an increase in research articles regarding GP training in Australia, and changed educational practice. Project teams led mainly by academics sometimes struggled to recruit participants or engage with practitioners to create sustained change. Project teams led mainly by GPs without prior research experience sometimes struggled with the research process and important local results were not disseminated nationally. Successful project teams blended practical experience with academic expertise and disseminated their results as well as implementing local change.

Discussion and conclusions
Practical issues in postgraduate training can be addressed by blending the practical experience of GP trainers and medical educators, with the research skills of academics.
Are there unmet educational needs amongst foundation doctors in Lothian? Three different perspectives.

S Shad, D Harrison, K Adamson
S Shad, Postgraduate Education Centre, Royal Infirmary of Edinburgh, Little France, Edinburgh, EH16 4SA

Introduction
In Lothian, the foundation teaching programme is mapped to the UK foundation curriculum over the course of two years. However, we recognise that it is challenging to cover all things that a foundation doctor may be expected to know. The GMC standards of medical education in training states that “organisations must demonstrate a culture that both seeks and responds to feedback from learners and educators…on education and training.”(1) We wanted to investigate the opinions of foundation doctors, a potential group of tutors and those involved in overseeing the foundation programme locally in order to understand where there may be unmet needs in their education.

Methods
We developed online questionnaires to gather opinions from FY2s, middle grade doctors, associate directors of medical education (ADMEs) and foundation programme directors (FPDs).

Results
We had responses from 17 FY2s, 18 middle grade doctors and 6 ADMEs/FPDs. Just over half of the FY2s felt that there were gaps in the FY teaching programme. The majority requested more acute specialty specific clinical teaching. Some highlighted that this teaching should be delivered by more junior doctors rather than just consultants. A third of the middle graders felt there were unmet educational needs for foundation doctors. 77% of those surveyed were interested in delivering sessions for FY doctors, whilst also gaining formal accreditation. The ADMEs and FPDs identified deficits in dealing with challenging situations, interpersonal skills and professional behaviour. They felt that these issues should be addressed through a mixture of small group sessions such as tutorials and simulation.

The common barrier identified by all groups was getting protected time away from clinical duties.

Key messages
A significant proportion of all groups felt there were unmet educational needs for foundation doctors. There seems to be a willing cohort of middle grade doctors to address this issue. It may be worth looking at designing a sign up system for small group sessions in addition to the foundation teaching programme to cover these gaps.

The incoming recognition of trainers means that those involved in teaching need to provide evidence of formal accreditation which could also be addressed by this programme. The barrier identified by all that would need to be overcome is balancing this against time constraints and service provision.

Assessing Quality of Educational Supervisor Reports

M Patel, P Baker
M Patel, Consultant Nephrologist, Department of Renal Medicine, Manchester Royal Infirmary, Oxford Road, Manchester, M13 9WL, UK

Background

The Educational Supervisor Report (ESR) is pivotal to the Annual Review of Clinical Progression (ARCP) process as it provides evidence of trainee engagement with the curriculum and learning through the workplace based appraisal process.\(^1\) Given the recent changes to the assessment process there is even more emphasis on ESRs to triangulate information from all WPBA and other sources and therefore the quality of the ESR is crucial and needs to be improved.\(^2\) This study evaluates whether a structured form to assess quality of ESR with individual feedback to the educational supervisor (ES) improves successive reports.

Methodology

A one page framework was used to assess the quality of each ESR (n=15) by the Renal Medicine ARCP panel at Health Education North West (HENW) in 2014. Formative feedback was then sent to each ES and their comments invited and individually discussed. The successive ESRs (n=14) were then assessed by the Renal ARCP panel in 2015 to see if there had been any improvement in quality. The ES feedback was assessed qualitatively using a thematic analysis.

Results

Successive ESRs showed:

- Significant improvement in quality of ESR with increased “excellent” grading (13.3%-50%) and decreased reports “requiring improvement” (33.3%-7.2%) (P<0.0001) (Figure 1).
- More detailed reports with greater free-text supporting judgements made and synthesizing evidence from multiple sources.
- More constructive feedback given to trainees with well-defined learning objectives which were incorporated in the trainee’s personal development plan.

Qualitative assessment of the ES feedback was overwhelmingly positive. Trainers found the structured form and their individual formative feedback very helpful. Many commented that knowing what domains to address was really useful so they could then ensure the relevant detail was included in the subsequent reports.

Conclusions and Recommendations

A simple structured form to assess ESR quality during ARCPs can provide useful formative feedback to ES and this significantly improves quality of successive ESRs. Recommendations from this study include rolling this process out into all medical specialties and larger training programmes such as Core Medical & Foundation training.

References


Figure 1. Assessment of Quality of Successive Educational Supervisor Reports - Renal Medicine 2014-2015.
Barriers To Providing Effective Feedback - A survey of Consultant’s in the West Midlands.

Stevenson H, Qureshi N, More, S
Stevenson H, h_stevenson27@hotmail.com

Background
With the role of revalidation, evaluation of training and feedback are increasingly important in medical education. Regular constructive feedback is central to developing competence however there is a wide variation in quality of feedback.

Method
We designed an online survey, sent to Consultants working across 4 different sites within the West Midlands. We asked what they perceived as barriers encountered when giving feedback to trainees, following the structure of Pendleton’s rules (1984) for effective feedback.

Results
The survey was completed by 55 Consultants (80% being educational supervisors). 80% had received formal training in giving feedback. 42% had received feedback on their method of giving feedback. 51% of Consultants cited lack of time and 31% lack of a suitable environment as a barrier to giving effective feedback. This was more common in the larger and busier hospitals.

Looking at the relationship between learner and feedback provider 33% felt concern over upsetting the professional relationship with the trainee was a barrier and 31% felt trainees were resistant to receiving criticism. 13% of consultants felt a barrier to giving constructive feedback was fear of causing more harm than good.

16% of Consultant’s felt that inconsistencies in feedback from other sources created a difficulty.

Conclusion
Although the numbers in our survey were small it clearly identified a need for improvement in ensuring effective feedback within medical education. Concern about upsetting the trainee highlights the need for further training in giving constructive feedback.

Kirkpatrick described a pyramid model for evaluation of training, with the lowest level being immediate reaction to the event, moving up to in depth evaluation that changes your behaviour or practice. Good feedback therefore requires the learner to reflect on what’s gone well and what could be improved, making an action plan for further development and improvement. Clearly this requires dedicated and adequate time as well as consistent observation of practice by the same trainer. Our survey revealed lack of time was perceived to be the largest barrier experienced by Consultant’s, 80% of whom were educational supervisors meaning they regularly complete assessments of trainee’s to allow progression. In the current NHS service provision often takes priority over training meaning assessment of practice is becoming a quick tick box exercise instead of an effective source of evaluation and reflection.
Being the change you want to see in your training. Using Trainee Feedback to Improve Surgical Induction

S Williams, R Bamford, C Rowlands, P Orchard, P Boorman, R Longman, J Coulston
S Williams. Surgical Specialist Trainee. Royal United Hospitals NHS Foundation Trust, Combe Park, Bath. BA1 3NG

Introduction
Comprehensive Induction programmes are an essential tool for preparing trainees for their workplace, their role and develop the necessary skills. Feedback from trainees participating in these events can be valuable in shaping the development of these programmes. In line with GMC guidelines, Health Education South West introduced an induction programme for first year General Surgical Trainees. We aim to highlight the impact that trainee feedback can have on developing surgical training induction programmes.

Methods
A trainee led and consultant supported, Induction and Training Team was created. This pan regional group evaluated the available critically appraised evidence and the feedback from the previous three years induction sessions to make recommendations for future inductions. Feedback included 5 point Likert scale assessments of the induction programmes and 6 monthly semi-structured interviews to establish the value and sustainability of the courses.

Results
Trainees believed that the previous single day inductions had enjoyable sessions related to technical and non-technical skills however, these were not explored or developed in great enough depth to be sustainable or useful within clinical practice. In particular trainees expressed their significant anxiety of the transition between core and specialist trainee and were quoted as wanting a crash course in the skills required for the first week of specialist training. Trainees reported a desire to develop a support network. Trainees highlighted the difficulties in establishing useful professional relationships during a short period of time and would value the opportunity for social interaction as part of the programme.

Conclusion
Trainees value the use of induction but felt that further work could be done to improve the sessions. The value of peer and collegiate support for trainees during this stressful period should not be underestimated and requires time and a commitment to social as well as professional interactions to be sustainable. Creating relationships with senior trainees and programme directors would also aid this. Including sessions that develop technical and non-technical skills should be covered in depth over time and revisited during an induction for trainees to find them of continued value in the workplace. Allocating more time and establishing high quality, clinically relevant sessions could achieve this. As a result of this process, the group recommended the development of a three-day programme that that would be relevant to clinical practice, improve patient safety and reflect the pillars of clinical governance.
Chronic renal patients: why are we frightened?

H Blakey and S Grieve
S Grieve, Clinical Teaching Fellow, Medical Education Department, Clinical Sciences Building, University Hospital of Coventry of Warwickshire

Background and Purpose
Patients with end stage renal disease (ESRD) can present with diverse medical and surgical problems to any hospital department. There is a general feeling amongst junior doctors that renal patients are frightening to manage. To explore this further we surveyed junior doctors to assess their confidence in managing patients with chronic kidney disease (CKD) and ESRD. We explored why junior doctors feel less confident in managing renal patients in comparison to other patients and how their confidence could be improved. Levels of confidence have been linked to improved practice (1), therefore by understanding the confidence of junior doctors we can develop strategies for improving education and practice.

Methodology
We developed a paper-based questionnaire which was distributed to foundation year 1 (FY1), foundation year 2 (FY2) doctors and core medical trainees (CMT) within a teaching hospital. Doctors were asked to self-rate their level of confidence in managing patients with CKD, ESRD on haemodialysis (HD), ESRD on peritoneal dialysis (PD) and ESRD with renal transplant using Likert scales ranging from 1 (not at all confident), to 5 (very confident). A score of 3 or less was interpreted as lacking in confidence. We then looked for themes using open free-text questions exploring why confidence was lacking, and what measures could improve confidence.

Results
Surveys were completed by 80 doctors, 73% of whom see patients with renal disease at least once per week. Despite this, 60% of doctors lacked confidence in managing CKD; 90% lacked confidence in managing HD patients, 95% lacked confidence in managing PD patients, and 96% lacked confidence in managing renal transplant patients. The most commonly cited reasons for lacking confidence included prescribing uncertainties, fluid balance assessment and management, complexity of patients, and general lack of experience.

Discussion and Conclusions
This study highlights several areas of concern for junior doctors in managing patients with chronic renal disease. Additional teaching and exposure to clinical cases could amend this deficit in confidence, as suggested by the doctors we surveyed. Our next step will be to revise the current postgraduate medical teaching for FY1, FY2 and CMT doctors within our trust.

References:
Confidence levels of Foundation Doctors with teaching: The need for formal teacher training support

S Vitello, P Dilworth
S Vitello, Clinical Teaching Fellow, Royal Free Hospital, Pond Street, London, NW3 2QG

Background and Purpose
Teaching is one of the pillars of good medical practice, forming part of everyday practice. Teaching skills and theory extend beyond teaching medical students and juniors; they are applicable to explaining treatment plans to multi-disciplinary teams and difficult diagnoses to patients as well as to gaining consent for complicated procedures.
In the United Kingdom (UK), evidence of teaching is a requirement for revalidation and in particular for annual progression in foundation training. Teaching experience is also desired when applying for specialty training, registrar and consultancy posts in the UK.
Despite the importance of the ability to teach as a doctor, teacher training in the UK for doctors is currently optional and variable, and formal training for medical students at university rarely forms part of the curriculum.
In our large teaching hospital, teaching of clinical medical students is largely dependent on foundation doctors who are recruited and encouraged to provide bedside teaching on core clinical skills including history taking and examinations.
Anecdotally, teaching experience and confidence amongst junior doctors is variable.

We aimed to:
1. To establish:
a. The amount and type of teaching experience of foundation doctors in a large teaching hospital
b. Confidence levels with different teaching situations
c. What proportion have received formal teacher training?
d. What proportion are interested in teaching guidance?
2. To develop a teaching training guide for foundation doctors

Methodology
A questionnaire was designed to address the above. The questionnaire was emailed to all foundation doctors based at a large teaching hospital. Data collection is ongoing and to be completed by end January 2016.
A teaching guide with training sessions will be designed and delivered based on the above data collected. The guide and teacher training sessions will be pitched at the level and addressing issues raised in the questionnaire, but also refer to the applicability of teaching techniques to clinical practice.
A follow-up questionnaire will be designed and emailed to all foundation doctors to assess the usefulness of the guide for teaching medical students but also address its impact in clinical practice.

Results: In progress

Discussion and Conclusions
Provisional data suggests that confidence levels regarding teaching are variable amongst foundation doctors. Teaching guidance can support tutors with different aspects such as lesson planning, dealing with difficult students. Having a teaching guide may also engage more foundation doctors to teach and improve confidence of foundation doctors to teach and improve their clinical practice.
Developing a different kind of doctor? Findings from a study of a Broad-Based Training programme

K. Webb, A. Bullock, L. Allery, J. MacDonald, E. Muddiman, L. Pugsley
K. Webb, Researcher, CUREMeDE, School of Social Sciences, Cardiff University, 12 Museum Place, Cardiff CF10 3BG. Email: WebbKL1@cardiff.ac.uk

Background and Purpose
The need for medical practitioners to possess broader knowledge and skills is widely recognised.(1, 2) Since 2013, the two-year Broad-Based Training (BBT) programme devised by the Academy of Medical Royal Colleges (AoMRC) has run in regions across England.(3) BBT follows Foundation training and provides six-month placements in General Practice, Core Medical Training, Paediatrics and Psychiatry. BBT aims to develop: practitioners adept at managing complex cases, patient-focused care; specialty integration; and conviction in career choice. Our study explores whether BBT better prepares trainees for the changing landscape of healthcare delivery.

Methodology
Between 2013-2015, BBT cohort 1 trainees and comparator trainees completed baseline, follow-on and exit questionnaires (BBT2013, n=38; 36; 31. Comp2013, n=42; 24; 31). Cohort 2 have completed baseline and follow-on questionnaires (BBT2014, n=24; 24. Comp2014, n=48; 48). Statistical analysis used SPSS.

Results
BBT was the first choice of training pathway for BBT2013 (90%) and BBT2014 (96%). Significant differences were observed between BBT and comparator trainees. The majority of BBT trainees indicated not being ready to choose their onward career specialty, while comparator trainees reported being ready to choose much earlier (p<0.001). Management of patients with complex presentations on a daily basis was high for both BBT and Comparator trainees. Gaining a breadth of medical knowledge and skills was of key importance to BBT trainees. While not seeing their own specialty as being too specialist, comparator trainees recognised that training more generalist doctors was a good idea. They did not see additional time spent training (as with BBT) as a deterrent and recognised the need to be able to manage patients with more complex presentations themselves. BBT trainees reported significantly greater confidence and satisfaction with their training objectives. They believed that their training would develop practitioners: adept at managing complex presentations; with a wider perspective; and able to apply learning across specialties (p<0.01 respectively). BBT trainees were less sure about feeling well-equipped to progress successfully. Differences were expressed in how trainee groups judged their success.

Discussion and Conclusions
BBT aims were viewed positively by both groups of trainees. However, while there are commonalities there appear some interesting distinct differences between BBT and Comparator trainees with regard to career-planning and confidence. In the changing landscape of healthcare, BBT could fulfil a growing need in the NHS for a different type of trainee.

References
Developing Excellent Leaders - The Role of Executive Coaching for GP Specialty Trainees

S Harte, K McGlade.
S Harte, Apartment 8, Northview, Antrim Road, Newtownabbey, Co. Antrim, BT367JL, Northern Ireland.

Background
Innovative educational approaches are needed to develop reflective medical practitioners who will lead culture change. Executive coaching has been suggested as a possible tool\(^1\), but the evidence base is in its infancy. Coaching creates a safe, empowering, ‘high-challenge, high support’ environment - impacting the working system and culture.

Methods
All GP specialty trainees (ST3s) in Northern Ireland completed a questionnaire about their knowledge and experience of coaching, and the importance of developing leadership abilities. Six trainees underwent six sessions of coaching by professional coaches over a 12 week period and then completed a post-coaching questionnaire and semi-structured interview.

Results
Baseline knowledge of coaching was sparse, and none had any experience of formal coaching themselves. Trainees felt under-equipped for taking on positions of leadership, but were keen to develop themselves.

The short intervention appeared to result in a mind-set shift concerning leadership. Trainees grew in self-efficacy by recognising strengths and transferable skills. Clear shifts were identified in four key areas of leadership: courage (delegation, conflict management, appropriate assertiveness, and challenging defensive medical decision-making), passion (experimental attitude, creativity, self-compassion, positivity, stress reduction, reframing ‘failure’, resilience), impact (time management, effectiveness, action planning, pro-activity), and vision (understanding personal values, culture creation). New enthusiasm, willingness and desire to increase leadership responsibilities was apparent.

Discussion and Conclusions
This is the first UK study examining professional executive face-to-face coaching as an educational method for doctors. The 12 week intervention was perceived as intense at times, and flexibility would be needed to personalise this regime. Trainees were positive about having a non-medical coach and found the experience stimulating and challenging, increasing self-awareness and emotional intelligence. Coaching helps provide leadership ‘language’ and ‘identity’. It appears to ‘name’ clients as ‘leaders’ and challenges leadership ‘imposter phenomenon’\(^2\). Coaching provided bespoke, deep, experiential learning, with transferable benefits not otherwise available in the Specialty Training programme.

References
Does oncoplastic cross-speciality training have an impact on the professional identity development of breast surgical trainees?

T AK Gandamihardja and R Di Napoli
T AK Gandamihardja, Consultant Oncoplastic Breast Surgeon, North Middlesex University Hospital NHS Trust, Sterling Way, London N18 1QX

Background
Breast oncoplastic fellowships entail cross-speciality training, which combines philosophies and practices of two different specialities: general surgery and plastic surgery. This specific training environment has existed for over a decade, yet very little has been written about the experiences of those who have trained within this setting. Below, we investigate whether cross-speciality training influences the development of professional identity of breast surgical trainees.

Method
A qualitative study, involving semi-structured interviews, was conducted with general surgeons who were either undertaking or had completed a national breast oncoplastic fellowship. All interviews were conducted via Skype, recorded, transcribed and themes extracted and indexed in order to facilitate the development of analytical categories.

Results
Five general surgeons participated in the study (3F:2M): current in-post oncoplastic fellows = 2, SpR = 1, locum consultant = 1 and substantive consultant = 1. All participants experienced an identity shift during their oncoplastic fellowships: becoming less of a general surgeon and acquiring traits more synonymous with a plastic surgeon. This transformation ran parallel with increased proficiency and legitimacy within the community of practice. Despite initial challenges of lack of finance, conflict and isolation, participants felt that cross-speciality training was vital for their career progression, had a positive impact and help shape their ultimate professional identities.

Discussion
The results have shown that the development of identity in the setting of cross speciality training occurs in three stages. Firstly, trainees required affirmation and recognition within the cross-speciality environment. The second stage involved a shift in their perceived professional identity of what type of surgeon they already were or were becoming. The last stage concluded with the construction of a matured specialist identity as an oncoplastic breast surgeon. The continuation of skill refinement and knowledge acquisition was re-iterated to remain an important aspect of becoming a matured specialist. This study has highlighted an interesting journey of professional identity development within the cross-speciality environment. Cooperativeness between the two communities of practices appears to be vital in ensuring an efficient and beneficial training experience. This understanding may help shape the delivery of a more tailored training programme within the cross-speciality structure.
Introduction
The GMC state that as doctors we must be competent in teaching and contribute to the training of other doctors and students [1]. Alas, the techniques required to deliver an effective teaching session are not a mandatory component of undergraduate or postgraduate training. Teaching is vital for continued medical education and regularly forms part of speciality training recruitment. Developing these skills as foundation doctors will improve junior trainees overall knowledge and confidence to ultimately improve patient care.

Aims
Our primary aim was to develop an innovative clinical teaching programme to deliver to junior doctors focusing on the preparation and techniques needed for an effective teaching session. We explored different teaching styles and how to overcome barriers to good teaching. We aimed to inspire our participants to change their teaching behaviours and discussed techniques to improve interaction with students, as well as the principles of giving effective feedback. The programme also provided a basis for further postgraduate teaching opportunities.

Method
We developed a three session based programme in a district general hospital in Northern Ireland that was delivered to twelve foundation doctors. The initial two sessions were lecture based and led by clinical teaching fellows focusing on techniques and strategies. The final session was practical based allowing participants the opportunity to utilise newly acquired skills. Participants completed pre and post-course questionnaires. Participants received feedback and methods for future development.

Results
Overall, we found that the majority of participants felt the programme improved their confidence and knowledge in delivering a clinical teaching session. Post-course questionnaire results showed that all participants thought that the skills taught would change their teaching behaviour and aid them in their future careers.

Conclusion
Development of teaching skills is a central component of professional progression and pivotal to becoming a competent medical practitioner. Targeting junior trainees will improve formal and informal teaching to aid knowledge and skills required to ultimately improve patient care in Northern Ireland.

References

G Pickering, P Dacombe, R Bamford, M Acharya, M Crowther, S Eastaugh-Waring and J Coulston
G Pickering, Severn School of Surgery, Severn Deanery, Deanery House, Vantage Business Park, Old Gloucester Road, Bristol, BS16 1GW.

Background and Purpose
Orthopaedic training in the 21st century faces a variety of new and continually evolving challenges. Reduced training time related to working time directives, efficiency pressures and the increased focus on quality and outcomes in the wake of the ‘Get It Right First Time’ report all impact on the ability of Orthopaedic Trainees to achieve their required competencies. In addition the development of Generic Professional Capabilities in areas such as patient safety, communication and teamwork was a key aspect of the recent Shape of Training Review. In an attempt to address these challenges simulation in surgical training is now well established, and is supported by both the GMC and HEE leading to its incorporation into the Intercollegiate Surgical Curriculum Programme1.

Methodology
An intensive, simulation-rich two-day “boot camp” training programme was developed based upon the programmes run by the Royal College of Surgeons Ireland, as well as programmes within the UK in Cardiothoracic and Neurosurgery2. The boot camp was run over two-days at the Bristol Medical Simulation Centre, and the University of Bristol’s Vesalius Centre. Day one focussed upon ‘Human Factors’ and the development of non-technical skills, whilst the second day consisted of short lectures and practical cadaveric dissection workshops.

Results
Prior to the boot camp the vast majority of trainees reported no previous formal training in non-technical skills. All trainees demonstrated recordable improvement in situational awareness, inter-personal skills and stress management over the course of the day. Open, non-judgmental group feedback sessions demonstrated the development of a constructive learning environment and an increased level of understanding from trainees. Formal post course feedback revealed high levels of trainee satisfaction and a subjective development in skills.
All trainees reported a significantly improved confidence towards all areas of surgical management covered in the cadaveric session, alongside increased levels of technical ability demonstrated through practical tests and objective, structured assessments.
Written feedback across both days was outstanding, reflected in high levels of desire for repeat courses and future involvement of trainees at a faculty level.

Discussion and Conclusions
Significant external factors and pressures will continue to have an effect on both orthopaedic and all medical speciality training. In addition, the acknowledgement of the importance of non-technical skills within training adds a new level of training need requiring address. Simulation based ‘Boot camps’ offer an excellent opportunity to begin to address these training needs and concerns. They are resource efficient, well received by trainees and demonstrate measurable, objective improvement.

References
Establishing an innovative Trust based training programme

K Wright, A Williamson, J Hanley and M Ragbir
K Wright, Education Programme Coordinator, Newcastle Upon Tyne Hospitals NHS Foundation Trust, Royal Victoria Infirmary, Newcastle Upon Tyne, UK

Introduction
The Newcastle Upon Tyne Hospitals NHS Foundation Trust provides the widest range of specialist services in the UK. The North East and Cumbria struggles to fill training posts, resulting in service gaps. This was exacerbated by reductions in surgical posts to meet the curriculum requirements of the 2014 Foundation Programme.

Aims
• To recruit high calibre individuals to provide a stable workforce to deliver safe clinical care
• To attract suitably qualified applicants from outside the North East and Cumbria region
• To deliver a Trust-based programme providing training which is equivalent of Core Surgical Training

Method
A surgical rotation of 16 posts was established to provide equivalent experience to an accredited training programme. A teaching programme supplemented with experience in basic surgical techniques in the Newcastle Surgical Training Centre was offered. All posts were initially for 12 months, with the possibility of a second year subject an Annual Review of Competency Progression (ARCP). Agreement was negotiated with The Royal College of Surgeons of England for trainees to access the Intercollegiate Surgical Curriculum Programme (ISCP) surgical trainee portfolio.

Results
14 successful candidates had completed their Foundation competencies and 11 were from outside the region. 2 trainees left after 10 months and the remaining 14 were successful at the end of year review. 6 NSR Doctors successfully applied for Core Surgical Training; 1 obtained a General Surgery ST3 post; 5 are continuing to a second year of the programme and 3 have secured jobs in other areas. 11 of the 16 doctors stayed in the region. Evaluation from the programme has been very positive including comments such as “I have had a fantastic year and I am glad that I moved up to Newcastle”; “A wide range of surgical specialities overseen by dedicated consultants provides an excellent firm foundation for learning”.

The 2015–2016 Programme has increased to 22 posts which were filled in a single recruitment process. 8 were from outside the North East and Cumbria.

Conclusion
The NSR has been a successful initiative. High calibre individuals have been recruited and provided a stable workforce for safe patient care. The NSR has attracted applicants from outside North East and Cumbria and the majority have stayed in the region. The training programme has delivered the equivalent of Core Surgical Training. Some specialties are exploring the possibility of setting up ST3+ training programmes (CCT via CESR).
Fact or fiction? Realising the learning value of workplace-based assessment

A Barrett, R Galvin, AJJA Scherpbier, PW Teunissen, A O'Shaughnessy, M Horgan
A Barrett, RCPI, Frederick House, 19 South Frederick St, Dublin 2

Introduction
Workplace-based assessments (WBA) were originally intended to inform learning and development by structuring effective observation-based feedback. The success of this innovation has not yet been established, due in part to the widely varied tools, implementation strategies and research approaches. Using an emerging conceptual framework of experience, trajectories and reifications (ETR) in workplace learning¹ we aimed to explore trainer and trainee experiences and perceptions of the learning value of workplace-based assessments.

Methods
Trainers and postgraduate medical trainees who had used at least one WBA in the previous year were invited to participate in semi structured interviews for this phenomenological study, approved by the institution’s research ethics committee. We used a template analysis method to explore and compare the experiences of the two groups and to attempt to understand how these experiences may have shaped their perceptions of the learning value of WBA.

Results
Nine trainers and eight trainees participated in the study. Understanding and articulation of learning was complex and differed both among and between trainers and trainees. Common themes emerged among the two groups around issues of responsibility and engagement along with (mis)understandings of the purpose of the individual tools. Trainer-specific themes emerged related to the concurrent implementation of a new e-portfolio and perceptions of increased workload. Trainees associated WBA with a training value but could not translate experiences into learning values. Trainees also associated WBA with a potential value in ‘anchoring’ performance.

Discussion
Inconsistency in understanding of the purpose of WBA was evident in this study. However, attitudes towards the potential learning value of WBA were positive and linked to the delivery and provision of feedback on both good practice and areas for improvement. The limited exposure and varying WBA experiences encountered in this study limits our ability to interpret and plot (or track), trajectories arising from these experiences. While this limitation may be related to the specific context in which the WBA has been implemented it highlights the need for more longitudinal studies to explore the educational impact of WBA.

Conclusions
WBA provides trainees with a justified reason to approach trainers for feedback. WBA is not being reified as the solution to the provision of formative assessment originally intended. A culture change may be required to change the focus of WBA research and reconceptualise WBA as a workplace learning practice supported by robust tools as opposed to a set of tools hindered by poor implementation practices.

References
Factors influencing Medical Career Decisions and Advancement amongst Trainees in Northern Ireland

R Hutton
R Hutton, ADEPT Clinical Leadership Fellow and ST5 Urology Trainee, 557 Ormeau Road, Belfast, BT7 3JA

Introduction and rationale
There are currently 144 vacant training posts in Northern Ireland (NI). Vacancies on training programmes arise for a number of reasons such as out of programme attachments, maternity leave, sick leave, resignations and completion of training during the course of the year. With an 18% decrease in progression to Specialty Training (ST) across the United Kingdom (UK) since 2011, recruitment shortfalls increasingly contribute to this rising number of vacant posts.

It is accepted that gaps in training programmes adversely affect training opportunities for the trainees working on that rota, which can directly impact on patient care. As doctors in training represent up to 50% of the secondary care medical workforce across the UK, vacant training posts also results in an unpredictable number of vacancies which is difficult to plan at a strategic level. Consequently, we have seen a greater reliance upon locum doctors, with increasing financial implications.

In response, a series of focus groups were conducted with doctors at all stages of training in NI to establish the factors which influence their career decisions. The trainees were also asked how they thought the HSC could improve how it recruits, trains and retains high quality trainees to Northern Ireland.

Methods
All 1800 doctors in training registered with NIMDTA were invited to participate by email, with the support of the Medical Directors in each HSC Trust. An invitation was extended in the Foundation Weekly Newsletter through the Foundation School. In total, 62 trainees across all training grades and specialty programmes participated via focus groups with a single facilitator. A further four trainees, provided information via email. 12 fifth year medical students sought participation.

Discussion and Conclusion
It is clear that whilst academic and clinical factors play an important role in career development, lifestyle factors predominate in determining career decisions amongst Postgraduate Medical Trainees in Northern Ireland. Trainees feel undervalued by the HSC Trusts in which they work; they describe how inefficient human resources/ medical staffing processes and a lack of focus on training has contributed to the increasing number of vacant posts and subsequent tendency towards locum work.

Trainees would like to see demonstrable, real and appropriate consequences for the units that fail in their ability to deliver training. They feel this would add value in increasing medical morale and sense of value within the organisation. An example of government paper on Liberating the NHS through patient involvement was discussed in irony: “no decision about me, without me”.

Hospitalist Physician Associates Help Bridge the Duty Hours Gap in US Teaching Hospitals

R A Rienzo, A Garino
R A Rienzo, Assistant Professor, Yale School of Medicine Physician Associate Program, New Haven, CT USA 06510

Background and Purpose
In the United States, residency training programs for medical doctors are overseen by the Accreditation Council for Graduate Medical Education (ACGME). In 2003, the ACGME mandated that resident doctors’ work week not exceed 80 hours, creating a manpower shortage in teaching hospitals nationwide. We explored how the hiring of Physician Associates (PAs) at one academic teaching facility impacted this shortage.

Resolution
One major teaching institution, Yale New Haven Hospital (YNHH), approached this shortage by expanding their Hospitalist service with both additional senior Attending Physicians and Physician Assistants, a.k.a. Physician Associates. Over five years, the service was expanded from 6 Attendings and 6 PAs in 2003 to 45 Attendings and 36 PAs and Advanced Practice Nurses (APNs) in 2007. Hospitalist coverage was expanded beyond General Internal Medicine to include Cardiology, Oncology and Medical Intensive Care Unit (MICU). By 2014, the service had grown to 101 Attendings and 71 PAs and APNs. Hip Fracture Co-Management and Hospitalist Procedure Teams, composed of Attendings and PAs, were created in 2012. Annual discharges from the Hospitalist services increased from 3161 in 2003 to greater than 20,000 in 2014. The Department of Surgery similarly responded to the mandate by adding 10 PAs to the existing 3, and incrementally increasing that number to the current staff of 85 PAs and APNs.

Outcomes
Lengths of stay, transfers to the MICU, and morbidity on the Hospitalist service have all remained stable or improved over this period of development in response to the ACGME mandate. Patient satisfaction has improved and “Code Blue” events have decreased. The increasing capacity of the Hospitalist service has allowed YNHH to add 168 dedicated oncology beds and acquire a neighboring 511-bed hospital while enabling the dedicated residency/teaching services to maintain the maximum ACGME-allowable 5 admissions per day and meet the duty-hours mandate.

Conclusion
PAs can provide high quality patient care and can be effectively utilized by teaching hospitals to help residencies function within the mandates of duty-hour restrictions placed on them by their accrediting bodies. In the US, licensed, certified PAs function with delegated autonomy as dependent practitioners under their supervising physicians. Because they enjoy the broadest scope of practice of any clinical profession in the US, and by virtue of their Generalist training, they are uniquely positioned to assist residencies and teaching hospitals in meeting patient care needs in the setting of resident limitations.

References
Human Factors Training is a Valued and Effective for Surgical Trainees

R Bamford. HESW Simulation and Non-Technical Skills Fellow. Musgrove Park Hospital. Taunton. TA15DA

Introduction
Human Factors is a scientific discipline that encompasses all the features that can influence people’s behaviour, performance and ability at work. By understanding this, strategies can be applied to optimise performance and well being of patients and healthcare professionals. The Severn School of Surgery offers a comprehensive introduction to Human Factors for all Core and Specialist Surgical Trainees. Trainees are immersed within a surgical simulation setting based upon real events and asked to behave in the role appropriate for the scenario. It is not designed as a test and is a safe environment to try new ideas and express ones own thoughts and abilities. We aim to highlight the perceived benefits of this course.

Method
All trainees who have attended Human Factors Training at the Bristol Medical Simulation Centre over the past 12 months have been asked to complete an online post course survey. The survey focused on their experience and the perceived impact these experiences would have on their level of training, current role and whether they were more prepared for the workplace on a 5-point likert scale. Trainees were offered a free text box to add additional comments regarding their experience and the impact it has on their current clinical placement.

Results
71 Trainees have participated in the course over the past 12 months and 61 returned completed questionnaires. 29 were Core Trainees, 21 General Surgery Specialist Trainees and 11 Orthopaedic Specialist trainees. 39% (17/61) of trainees reported having had Human Factors Training previously. All trainees agreed that Human Factors was relevant to their training. 85% reported that the scenarios were realistic and fully engaged and immersed the trainee in the situation. 82% reported an increase in confidence in managing difficult scenarios at work and 85% were more aware of the impact of human factors in the clinical environment. Overall, sessions related situational awareness, decision-making, communication skills and teamwork and leadership were reported to be relevant to their level of training (90%), relevant to their current role (90%) and made them more prepared for the workplace (84%). Free text analysis quoted trainees reporting the excellent quality of the simulation and the invaluable experience that should be available more frequently.

Conclusion
Immersive, simulated Human Factors Training is valued and useful to trainees at all levels of surgical training and can make them more prepared for the workplace.
Improving patient confidence in surgical care through training requirements- do numbers of indexed procedures matter?

K Booth, R Jeganathan, M Boohan
K Booth, Cardiothoracic Specialist Registrar and Postgraduate Student in Medical Education, Queen’s University, University Road, Belfast, BT7 1NN

Background and Purpose
Post graduate Cardiothoracic surgery is the only postgraduate surgical specialty not to require trainees to have a certain number of indexed procedures performed prior to completion of certification of training. Is this because there is a lack of evidence? Some senior surgeons feel national reporting is having a negative impact on recruitment into the specialty.¹ The Bristol Heart scandal did not improve public confidence in the specialty and surgical training has a responsibility to respond.² Procedural Based Assessment has widely implanted in the cardiothoracic curricula since 2007 as a valid and acceptable way of determining competence.³ There is no direct literature evidence or validity that numbers of procedures performed is better. Surgical ability combines dexterity and decision making ability, which may be best assessed using both methods.⁴

Methodology
This is a quantitative and qualitative study using online questionnaires distributed to cardiothoracic registrars in training and consultant cardiothoracic surgeons in practice.

Results
The majority supported the idea of operative requirements for CCT in Cardiothoracic surgery. A wide spread of registrar experience was seen even prior to specialist registrar appointment, reflecting the difference at national selection between trainees who have previous operative experience prior to application. The difference was seen to be as high as 45.6% with the mean number of index cases performed as a first operator elevated. Consultant members overwhelmingly felt that confidence for consultant practice arose from numbers of operative experience, breadth of clinical knowledge and application and the use of multi centre cardiothoracic training.

Discussion and Conclusion
The results have been accepted and implemented improving trainee and patient confidence. Training in surgery is ideally tailored individually, according to training-centre factors, trainer-trainee relationships, and the personal needs of the trainee (both professionally and personally).

References
Is trainee experience of medical education influencing intent to practise in Ireland?

P Kavanagh, S O’Hare
Dr Paul Kavanagh, Director of Professional Development and Practice, Medical Council Ireland, Kingram House, Kingram Place, Dublin 2, D02 XY88

Background and Purpose:
Understanding how postgraduate medical education influences trainee retention is a useful contribution to wider discussions on doctor retention in the Irish healthcare system. The Irish Medical Council (the regulator of doctors in Ireland) collected trainees’ views on retention and examined how aspects of educational environments were associated with retention intent.

Methodology
The inaugural Your Training Counts survey ran from April to July 2014 and collected feedback from over 1400 trainees (just over half of all trainees registered in Ireland). Your Training Counts contained over 100 items, which focussed on exploring trainees’ experience of clinical learning environments, and included additional items on health and wellbeing, work engagement and retention intentions.

A range of statistical procedures were used to look for significant associations between trainees’ responses to retention items and other items within Your Training Counts, trainee characteristics (e.g. gender, age) and other contextual factors (type of clinical learning site).

Results
We asked trainees if, apart from temporary visits abroad, they intended to practise medicine in Ireland for the foreseeable future. 21% of trainees intended to definitely not (6%), or probably not (15%), practise medicine in Ireland in the foreseeable future.

Trainees who expressed intent to stay and practise in Ireland for the foreseeable future rated their learning environments significantly more highly than trainees who intended to leave. Intent to stay in Ireland was also associated with higher levels of trainee work engagement, wellbeing, quality of life and health.

Older trainees, trainees on Higher Specialist Training programmes, trainees who were bullied during training, or who had a limiting illness, health problem or disability, were more likely than others to say they intended to leave medical practise in Ireland.

Discussion and Conclusions
Many factors that influence a doctor’s decision to migrate are outside medical education. However, trainee retention intentions are significantly associated with experiences of learning environments – better training experiences are associated with increased intent to stay in Ireland. Could bringing a focus to improving training experiences make significant impacts in reducing the number of trainees who want to pursue a long-term medical career outside of Ireland?
It's For You-hooo... Simulation training increases confidence in telephone skills in core surgical trainees

Z Oliphant, CD Rodd, I Langdon, J Coulston, R Bamford.
Z Oliphant, Weston General Hospital, Grange Road, Uphill, Weston-Super-Mare, BS23 4TQ

Background and Purpose
Communication are essential skills required by Doctors working in the NHS. The Royal College of Surgeons assesses these skills in membership examinations and as part of trainee selection interviews. Core surgical trainees make and receive numerous telephone calls throughout the working day, especially during on call periods. Telephone communication skills are critical for the accurate transfer of information, decision making, team work and patient safety. Although telephone communication skills teaching has been described previously for medical students,¹ there is limited evidence around session design for surgical trainees.

Method
A session on telephone skills was incorporated in a 3-day Induction Bootcamp for new Core Surgical Trainees. Trainees participated in simulated telephone calls as the core surgical trainee on call. Faculty and other trainees participated as other healthcare professionals. Trainees were taken through a number of scenarios taken from real practice and responded with verbal communication alone whilst being observed by peers. Debriefing using Pendleton’s rules encouraged trainees to reflect on the principles of good communication skills. Trainees were asked to self-rate their confidence in telephone skills using a 5 point Likert scale before and after the session via an online questionnaire and their perceived value of the session.

Results
26 core surgical trainees attended the session and 20 participants completed the post-course questionnaire. Trainees reported the session was relevant to their training (mean=4.45) and their role (mean=4.55). They enjoyed the session (mean=4.10) and found it useful (mean=4.50). It made them feel more prepared for starting core surgical training (mean=4.10). There was a significant increase in trainees’ self-reported level of confidence in discussing cases by telephone (P=0.003). Trainees reflected on the importance of appreciating the other person’s point of view and the limitations of telephone communication. They discussed the value of being polite and maintaining good working relationships with colleagues. They also discussed methods for dealing with clinical questions beyond their level of expertise, such as calling back after speaking to a senior colleague.

Discussion and Conclusions
Telephone skills are a vital aspect of communication for core surgical trainees and this is the first time it has been formally introduced into regional teaching in this deanery. Trainees felt more confident in their telephone skills after the course and felt the teaching session was useful and enjoyable. This suggests simulation is effective in teaching telephone skills and it is a valuable experience for core trainees for benefiting their clinical practice.

References
Junior Doctors: Is it all about the money? What is the Cost of Training?

E Darvill, L Steele, M Holdway, P Fletcher.
E Darvill, Postgraduate Clinical Teaching Fellow, Department of Postgraduate Medical Education, Gloucestershire Hospitals NHS Foundation Trust, Sandford Education Centre, Keynsham Road, Cheltenham. GL53 7PX

Background
“When asked what proportion of time was spent on ‘service’, 91% of trainees reported spending 80-100% of time on service rather than training.” This was described in the RCP survey 2014 and considered to be a key factor in influencing trainee’s decisions to apply for further training in acute medical specialties.¹ In 2015, nearly half of those completing the Foundation Programme did not progress straight onto specialist training.² Many posts are left unfilled, leaving gaps in rotas. This is likely to be contributing to the current strain on acute service provision for our patients. The cost of temporary staff to fill rota gaps is significant factor in hospital overspends.³ In addition to the financial implications for the NHS this also contributes to poor continuity of care and reduces morale amongst regular staff. Improved training opportunities for junior doctors might encourage more of our doctors to progress on through specialty training, reduce gaps and improve morale. This could reduce the cost to the health service overall when compared with the cost of temporary staff.

Aim
To establish the amount of time trainees spend participating in bedside teaching and feedback in a typical medical ward environment and to provide an estimate of the cost of this per trainee per annum.

Methods
A pilot study was initially undertaken to develop a datasheet to record teaching events. This was formalised as the data recording tool for the project.

All junior doctors (F1 to ST7) in medical specialties at Cheltenham General Hospital were invited to participate. The participants were briefed the week before and familiarised with the data recording tool. The tool was handed out on a Monday to each of the trainees to complete during that week. The researchers made contact with the participants’ part way through the week to ensure that they were complying. The data sheets were collected on the Friday evening. Time involved in training will be costed according to duration and pay scale.

Results and Discussion
The results will be discussed within the context of currently available literature, with discussion of their implications and recommendations for future practice.

References
2 UK Foundation Programme Office. Foundation Programme Annual Report 2015. UK Foundation Programme Office. 2015.
Laparoscopy training at Home – encouraging early results to improve technical skills in Core Surgical Trainees

Bamford R, Rodd CD, Langdon I, Eastaugh-Waring S, Coulston J
R Bamford. HESW Simulation and Non-Technical Skills Fellow. Musgrove Park Hospital. Taunton. TA15DA

Introduction
Surgical Trainees must develop a range of skills during their training with technical skills being of great importance. Enhances in technology have meant that minimally invasive techniques are commonplace and used across the surgical specialities. As a novice, the skills required for laparoscopic surgery can be transferred to all minimally invasive techniques. The changing landscape of the NHS and the impact of the working European Working Time Directive have meant that alternative training methods must be adopted. Simulation offers one solution to this, but to be effective must be readily available for repeated deliberate practice and offer feedback.

Method
First year Core Surgical Trainees were given access to innovative ‘at home’ laparoscopic trainers that provide an online curriculum and 5 specific tasks to perform for 5 months. The programme is supported by software that track instrument movements and gives immediate technical feedback to the trainee and allows video links to be sent to a trainer for further feedback. Trainees were encouraged to complete each task 10 times before submitting a final video for assessment and grading before proceeding to the next task. Results from the instrument measurements were recorded and sent to the assessor for analysis. Initial results after 4 months of use have been assessed.

Results
12 trainees were invited to be part of the programme and 11 registered and 50% (6/12) of trainees had completed more than half the tasks. On average each task has been performed 9 (1-25) times before final submission. The number of attempts was higher for the first three tasks (13) than the later ones (6). Overall, significant improvements were identified in time taken to complete the task (p=0.001), total distance travelled (p=0.022), smoothness of the instruments (p=0.01) and time off screen (0.03).

Conclusion
At home surgical simulators are used by Core Surgical Trainees and show significant improvements in the technical skills associated with performing set tasks. Further work is required to identify if this improvement is sustained and whether it can be associated with clinical performance.
Mentoring in Emergency Medicine in the West of Scotland

N Moultrie, C McKiernan
N Moultrie, Emergency Department, Monklands District General Hospital, Airdrie, Lanarkshire, ML6 0JS

Background
Emergency medicine (EM) trainees spend 18 months of their first 2 years in Acute Medicine, Anaesthetics and Intensive Care Medicine rotations, during which time they have little contact with senior Emergency Medicine Physicians and may receive negative advice about EM from other clinicians. A significant number of junior trainees go on to switch specialties. Junior doctors who are mentored describe higher career satisfaction\(^1\) and mentoring has been shown to influence choice of specialty\(^2\). To address this, we set up a mentoring programme, matching junior trainees with a senior EM trainee who provides a primary point of contact and meets them several times a year. With the increasing use of online communication and education, we feel that facilitating face-to-face informal advice and support is a back to basics approach that will nurture a sense of inclusiveness in the Emergency Medicine community. It will also provide the mentors some ownership of the future of their specialty by directly influencing the next cohort of trainees.

Methodology
The programme was established in February 2015; 34 ACCS and LAT trainees were allocated to 18 mentors from ST3-5 level. The mentors volunteered but all junior trainees were included unless they opted out. In August 2015 an email survey was undertaken prior to updating the programme.

Results
There were 16 respondents (31%): 9 (50%) mentors and 7 (21%) mentees. 100% wanted to continue to be involved. 10/16 (62.5%) found the programme useful or very useful. Four respondents had not met with their mentor/mentee at all, 10 met once, 1 twice and 1 more than twice. Respondents commented on difficulties contacting each other, problems finding time to meet up and the limitations of allocating mentors instead of allowing trainees to choose their own mentors.

Discussion and Conclusions
The majority of responses were positive but several limitations were identified, most significantly a lack of engagement, possibly due to problems with contact details, or lack of awareness. Therefore this year we are also promoting the programme at Registrar and ACCS teaching sessions and via our Facebook group, as well as switching to an opt-in system for mentees. It is hoped that once this programme becomes more established it will have a positive effect on retention and this will be investigated in the future.

One trainee commented: “I feel the mentoring scheme may not be enough to counter this (retention issue) but is certainly a step in the right direction.

References:
Multi-disciplinary fully immersive simulation as a means of teaching junior medical and nursing staff about “never-events”.

J Taylor, S Mercer
J Taylor, Simulation Fellow, Clinical Director, Centre for Simulation and Patient Safety, UK

Background and Purpose
We designed a multi-disciplinary, fully immersive simulation course intended for foundation doctors, and junior nurses. The course was designed around the 2015/2016 “Never Events” list published by NHS England, Patient Safety Domain. The purpose of the course, was to expose candidates to high fidelity simulation, improve their knowledge of human factors (HF) and non-technical skills (NTS) and increase their confidence when dealing with the acute consequences of a never event.

Methodology
Candidates were exposed to six high-fidelity scenarios, typically two or three as active candidates and the remainder as observers. All candidates took part in a human factors based video assisted debrief after each scenario, with some sessions including a ‘micro-teach’. On arrival, candidates were all asked to complete a questionnaire. Results were obtained from 14 nurses and 13 doctors in total. They indicated their answer to each of the five questions by marking an X on a 10cm line, measured to the nearest mm. They were then asked to complete the same questions after taking part in the course, to measure its effect. P-values were calculated using the Wilcoxon Signed-Rank test.

Results

<table>
<thead>
<tr>
<th>Question</th>
<th>Mean Pre-Course Response</th>
<th>Mean Post-Course Response</th>
<th>Improvement</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>How useful do you feel it is to practice scenarios with other multi-disciplinary professionals?</td>
<td>9.1</td>
<td>9.6</td>
<td>0.5</td>
<td>0.04263</td>
</tr>
<tr>
<td>How important is human factors and non-technical skills in your day-to-day job?</td>
<td>9.0</td>
<td>9.6</td>
<td>0.6</td>
<td>0.00090</td>
</tr>
<tr>
<td>How confident would you feel in managing the acute consequences of a “never event”?</td>
<td>4.8</td>
<td>7.5</td>
<td>2.7</td>
<td>0.00000</td>
</tr>
<tr>
<td>How willing would you be to take the role of leader when managing an unwell patient?</td>
<td>5.7</td>
<td>7.5</td>
<td>1.7</td>
<td>0.00034</td>
</tr>
<tr>
<td>Would you be able to show the qualities of good followership when working in a team?</td>
<td>7.2</td>
<td>8.4</td>
<td>1.2</td>
<td>0.00128</td>
</tr>
</tbody>
</table>

Discussion and Conclusions
This one-day fully immersive multi-disciplinary simulation course focusing on never events and human factors, has allowed junior medical and nursing staff the opportunity to rehearse and discuss the management of never events in the acute setting. It has also demonstrated an increase in the confidence of the participants and allowed an introduction to the concepts of leadership and followership, which are important elements of team resource management in a crisis situation.

References
Non-Technical Skills Simulation-Based Education in Urology: Challenges in Implementation

P Ravindra, N Woodier, D Bodiwala and HL Ratan
P Ravindra, Urology Specialty Registrar, Northampton General Hospital, Cliftonville, Northampton NN1 5DB, UK

Background and Purpose
Simulation-based education (SBE) to enhance technical and non-technical skills (NTS) is well established in specialties such as Anaesthesia (1). The inclusion of SBE in the Urology Higher Surgical Training curriculum is a new foray and presents challenges for both trainers and trainees (2). We aimed to evaluate the experiences of participants in a pilot regional NTS in Urology Training Day for Higher Specialty Trainees.

Methodology
A full-day programme was developed with the faculty expertise of a regional simulation centre in co-ordination with regional Urology Training Programme Directors. The focus was on managing urological ward-based emergency scenarios using high-fidelity SBE. Participants were required to complete a pre- and post-course evaluation to assess reactions and attitudes.

Results
10 trainees participated with 3 having prior education in NTS. Pre-course, the majority of participants were indifferent or did not want to be attending the day (60%). Almost all participants (90%) did not feel that NTS was an important part of training in Urology. Post-course, there was a change in attitude with 80% of participants stating that they were pleased they had attended. However, while all attendees appreciated the importance of practising teamwork, leadership and communication, only two participants agreed that NTS training would improve their clinical practice.

Discussion and Conclusions
There is evidence to suggest that NTS training in surgery, particularly in teamwork, translates to improved performance and outcomes for patients (3-6). This pilot supports both feasibility and face-validity of SBE for NTS in Urology (7). However, it is well recognised that learner attitudes can impact on these benefits. Our results show that trainees have significant apprehensions on the value of SBE and more troublingly, the value of effective NTS in practice. Further research is required to address these attitudes and to ascertain whether these are specialty or region specific. This ultimately presents challenges for trainers who are responsible for delivery of the curriculum.

References
Out-of-hours paediatric in-situ simulation: a quality improvement and educational tool

C Hart, T Bourke, A Thompson
C Hart, Clinical Fellow in Education and Simulation, Royal Belfast Hospital for Sick Children, 180-184 Falls Road, Belfast, BT12 6BE, UK.

Background and purpose
Many paediatric emergencies occur outside of the normal ‘9-5’ working hours. With intense workloads and a small cohort of staff on duty, out-of-hours medical emergencies are potentially more stressful and the additional pressure could uncover possible patient safety issues. We routinely carry out in-situ simulations at our tertiary paediatric hospital during the normal working day as multidisciplinary training and through this work we have identified some latent safety threats. Indeed, in-situ simulation has already been established as a quality improvement method1.

We aim to expand upon our previous work by using out-of-hours in-situ simulation to identify latent safety threats and evaluate it as an educational tool.

Methodology
The project began in November 2015 and we plan to complete around ten in-situ simulations both in and out-of-hours by the end of January 2016. The scenarios are adapted from standard simulations to suit the inpatient setting or created specifically for the project and are relevant to the clinical area where they are conducted. These scenarios are being carried out on various acute paediatric wards using a high-fidelity mobile infant simulator. The exact time of day each scenario occurs is agreed in advance by the simulation team but the on-call medical team is not notified. We are intending that a variety of different times and wards are incorporated to maximise the number of different staff members involved.

The simulation activity and any problems encountered are recorded on a proforma. There is a group debriefing after the simulation with all participants to discuss their experience and identify any concerns they wish to raise. All of the staff involved are invited to complete an anonymous feedback form which asks about their opinions on simulation and any training benefits they have gained from the exercise. A formal typed feedback sheet is also given to the nurse in charge of ward.

Results
To date we have conducted six in-situ simulations as part of this project and have gathered a significant amount of feedback. We hope to compare the data from the daytime and out-of-hours simulations to establish trends in safety risks and participant outcomes.

Discussion and conclusion
This project is close to completion and once all the data is gathered we hope to determine the educational value of out-of-hours simulation and if there are indeed more latent safety threats encountered.

Reference
Pilot study of an enhanced induction day to increase year 2 foundation doctor’s preparedness’ for starting their O&G placement.

S Zaher, Clinical Lecturer in Obstetrics &Gynaecology and Senior Speciality Trainee, Institute of Medical education, Cardiff University, Heath Park, Cardiff, CF14 4YU

Background and Purpose
In the United Kingdom, newly qualified doctors are enrolled for two years in Foundation Training. Currently Foundation Year 2 (F2) doctors can choose to have a 4 month rotation in Obstetrics and Gynaecology. Despite the expectation of the General Medical Council that students on graduation (and therefore on entry into Foundation Training) are competent at performing pelvic examinations (1), there is evidence that students on graduation may have had little or no opportunity to practice the pelvic examination and may feel neither competent nor confident about these skills (2).

F2 O&G doctors will be expected to take histories perform pelvic examinations and explain potentially distressing diagnoses.

Typically an Obstetrics and Gynaecology rotation will start with an induction day, which involves no training on undertaking pelvic examinations and no checks of the trainee’s competency at this complex skill.

The objective of this trial is to evaluate the effectiveness of an enhanced induction programme, comprising a pelvic examination teaching session and a communication skills workshop on the preparedness of foundation doctors starting their O&G post.

Methodology
F2 doctors starting an O&G rotation, will undergo routine hospital induction, in addition they will complete an enhanced induction comprising a pelvic examination teaching and a communication skills teaching session. Trainees will be asked to complete a questionnaire prior to this session and immediately post. A focus group will be created at the end of the attachment to discuss the value of this induction program.

Results
Initial pilot studies reveal that F2 doctors feel ill-equipped for starting their O&G post. Initial data post the enhanced induction day shows a perceived increase in confidence and preparedness for starting the post. Themes from the focus group place value and importance on clinical and communication skills training to be included in induction programs.

References
Providing Teacher Training for Junior Doctors that Volunteer to Teach Medical Students

S Vitello, A Sundaram
S Vitello, Royal Free Hospital, Pond St, London, NW3 2QG

Background
In our large teaching hospital, undergraduate clinical teaching is largely dependent on junior doctors. One structured teaching programme is ‘Twilight teaching’. Junior doctors volunteer to teach fourth-year medical students out-of-hours. There is currently no formal programme in place to train or support these tutors.

Method
We designed an initial questionnaire for ‘Twilight Tutors’ between September 2015 to June 2016, to establish prior teaching experience and training, confidence levels and interest in teacher training.

Based on this, we designed the Twilight Training and Mentoring (TTM) programme, consisting of six sessions covering topics including ‘Learning styles’ and ‘Dealing with difficult students’. These will take place between December 2015 and May 2016.

After each session, attendees will complete a questionnaire to evaluate the session and confidence levels.

Preliminary Results
The Initial questionnaire results (n=15): All tutors had prior teaching experience, 53% had received teacher training before. The majority were confident with teaching small groups (87%), teaching large groups (66%), bedside teaching (93%) and engaging students (89%). 20% were confident with dealing with difficult students. 100% were interested in teacher training; 73% interested in ‘how to deal with difficult students’, 87% in ‘medical education career advice’ and 60% in ‘learning styles’.

The first TTM session (‘Learning Styles’) results (n=19): 100% found the first session useful and felt more confident teaching and planning lessons after the session (mean 10-point likert scales: 8.4, 8.5, 8.7 respectively).

Conclusion
Teaching experience and prior training is variable amongst junior doctors. Junior doctors volunteering to teaching programmes would benefit from concomitant teaching training, as they are interested in such support, finding it both useful and bettering confidence levels.
Simulation and roleplay training for core surgical trainees: handover and managing the emergency take

Z Oliphant, E Tudor, E Upchurch, R Bamford, CD Rodd
Z Oliphant, Weston General Hospital, Weston-Super-Mare, BS23 4TQ

Background and Purpose
Leadership and management skills are essential for the safe running of a busy emergency take with multiple unwell patients. As handover between shifts occurs with increasing frequency, trainees must learn to lead an effective handover. There is only limited data available on effective teaching methods for handover, although learners have responded positively to simulation training in the past. The relevance of human factors to effective handover has been previously described. The aim here was to teach leadership and management skills through simulation and team roleplay.

Method
All core surgical trainees in Severn Deanery were invited to a regional teaching day on Surgical Emergencies. Trainees received 90 minutes training on how to manage the surgical take as a new ST3 registrar. Interactive small group sessions identified the key components of effective handover before proceeding to a simulated handover scenario with each trainee role-playing each member of the relevant healthcare professionals. The scenario itself focused on prioritisation of unwell and new patients. Debriefing addressed issues of communication, leadership, situation awareness and teamwork. Pendleton’s rules were applied during debriefing. Trainees were asked to give feedback on the session.

Results
18 core trainees attended the teaching day and 13 participants returned feedback forms. Trainees rated feedback on a five point Likert scale, where 1 was outstanding and 5 was very poor. The mean score for trainees’ overall impression of the session was 1.31. The mean score for content was 1.46 and the mean score for presentation was 1.46. Hand-outs (referring to simulated medical records and handover sheets) were rated as mean 1.50. The mean score for suitability for level was 1.46. Trainees increased in understanding of problems in handover, including difficulties in ‘needing to be at two handovers simultaneously due to cross-cover’. Trainees reported they learnt the value of ‘structure and handover to the entire team’, as well as clear delegation within the team and a detailed handover sheet.

Discussion and Conclusions
Trainees were positive about the session and felt the session was relevant for their level. The scenarios were selected as they were similar to scenarios trainees may encounter during MRCS examinations or interviews for higher surgical training. Core trainees were also positive about the presentation of material, which relied on simulation, discussion and debriefing. Trainee feedback demonstrates simulation handover training leaves trainees with key take-home messages for improving handover in clinical practice.

References
Simulation ward rounds facilitate human factors training in core surgical trainees

Z Oliphant, CD Rodd, I Langdon I, J Coulston, R Bamford
Z Oliphant, Weston General Hospital, Grange Road, Uphill, Weston-Super-Mare, BS23 4TQ

Background and Purpose
Human factors is the process by which a person interfaces with their environment, including systems and other people. The Royal College of Physicians and the Royal College of Nurses have identified that some of the barriers to effective ward rounds arise in human factors issues. Simulation ward rounds have previously been used for teaching foundation year 1 doctors and medical students. We have designed simulated ward round training for new core surgical trainees, highlighting issues around human factors. The aims were to increase confidence in communication, team-working, leadership, situation awareness, task management and decision making, as well as increase preparedness for core surgical training.

Method
All 26 trainees starting Core Surgical Training in Severn Deanery were invited to a 3-day Induction Bootcamp. Trainees received 90 minutes simulated ward round teaching in small groups. Participants received an introduction then participated in patient scenarios followed by debriefing. Trainees were encouraged to reflect using Pendleton’s rules. Trainees were asked to self-assess their confidence levels in an online anonymised before and after Bootcamp, using a 5 point Likert Scale. Trainees were also asked to feedback on the process of simulation ward round teaching.

Results
26 participants completed the pre-course questionnaire and 20 participants completed the post-course questionnaire. All course participants reported that the training was enjoyable (mean=4.40) and made them feel more prepared for starting work (mean=4.45). Rating scales for self-perceived confidence increased significantly across all domains, including leading a surgical team (+0.62, p=0.001), assessing surgical patients (+0.29, p=0.008), making decisions (+0.20, p=0.022) and managing patients on the ward (+0.31, p=0.005). Trainees also reported overall improvement in their non-technical skills (+0.42, p=0.001) and ability to deal with pressure (+0.14, p=0.022). During the teaching sessions trainees reflected on the importance of a systematic approach, utilising all team members and summarising plans. Trainees commented it made them ‘well prepared for the world of CT1’ and ‘really helped me focus on my training as well as the day-to-day challenges of my job.’

Discussion and Conclusions
Simulation ward round training is an entirely novel tool for training surgeons in human factors and non-technical skills. It took place within the wider context of a 3-day Bootcamp and other sessions during Bootcamp will have complemented learning during this session. Simulation ward rounds have increased trainees’ confidence in their non-technical skills. Debriefing using Pendleton’s rules was found to be effective for encouraging reflection in this study.

References
1 Royal College of Physicians and Royal College of Nurses. ‘Ward rounds in medicine: principles for best practice’ (2012)
Sub-Specialty Emergency Surgery Training for Core Surgical Trainees

J Lim, R Bamford, CD Rodd, I Langdon, JE Coulston
J Lim, ST8 Colorectal Surgery, University Hospitals Bristol NHS Foundation Trust, Upper Maudlin Street, Bristol, BS2 8HW

Introduction
Core surgical trainees (CSTs) have to rotate through different specialties in their two years of training. CSTs may not be comfortable with the level of knowledge or experience required in a specialty outside (or even within) their chosen theme and could have a significant impact on patient safety. The third day of the Severn Deanery Surgical Boot camp for CSTs focused on what was expected at their level for emergency cover from different surgical specialties (General Surgery, Otolaryngology, Urology, Vascular, Plastics, Orthopaedics and Gynaecology).

Methods
Prior to the start of the Boot Camp, an online survey was sent to all attendees. The survey quantified prior surgical experience and asked trainees to rate their own confidence at dealing with emergencies from the above specialties. After the Boot Camp, attendees were asked to complete a follow-up online questionnaire to provide feedback on the programme and to again rate their confidence at dealing with emergencies from the same specialties.

Results
Twenty-six CSTs attended the third day of the Boot Camp. Half had entered core training straight after their Foundation Programme years and just over a third (34.6%) had 12 months of their two years in a surgical post. Prior to core training, the most common specialties that trainees had experience in were orthopaedics (72%) or colorectal surgery (44%). Trainees felt least confident in managing gynaecology (48%), otolaryngology (36%) and plastic surgery (36%) emergencies, confident in managing urology (56%) and vascular (44%) emergencies and most confident in general (20%), orthopaedic (16%) and vascular (16%) emergencies. After the boot camp, 20 CSTs completed the follow-up questionnaire; 80% of trainees felt these sessions made them more prepared for the workplace. Mann-Whitney testing revealed significant improvements in a trainee’s self-reported awareness of patients’ presenting features of emergencies and their confidence in managing these emergencies within otolaryngology (p=0.036, p=0.001), gynaecology (p=0.008, p=0.025) and plastic surgery (p=0.035, p=0.014).

Discussion
Emergency Surgery Cross Cover training is perceived as beneficial by the CSTs. Further research is needed to ascertain if this model of introduction to core training translates to a better patient care and safety.
The challenges of organising a cadaveric training day.

P Orchard, R Bamford, C Rowlands, S Williams, R Longman, P Boorman, J E Coulston
P Orchard, General Surgical Registrar, Musgrove Park Hospital, Taunton, TA1 5DA

Introduction
Simulation training in surgery reduces both intra-operative time and errors and examples range from simple box trainers to cadavers. A systematic review showed that cadaveric workshops improve training, and are held in high regard. This article highlights the challenges associated with organising such events.

Method
In 2015 south west surgical trainees revamped the induction for the new general surgical ST3s with the creation of a three day bootcamp including a one day cadaveric course at the Vesalius Clinical Training Centre. A trainee led and Consultant supported group with an interest in Medical Education organised the events. A series of focus groups comprising of surgical trainees directed the content of the day, which was then linked to the ISCP curriculum, and the organising committee met regularly. Transcripts from these sessions and participant feedback directed the post event debriefing session that identified the challenges that arose.

Results
Focus groups identified the need for both open and laparoscopic techniques and agreed on seven surgical procedures to be included. The main content concern related to the unknown experience level of the trainees participating and being able to pitch the procedures at the correct educational and training level.

The focus group identified cost to surgical trainees as a significant barrier to events being successful. As a result, the training committee was tasked to provide the course free of charge. They identified a solution of sharing the cost of the cadavers between specialities. Orthopaedic and ENT trainees had cadaveric course planned with no overlaps on areas of the body and were therefore able to share the cadavers between all 3 specialities. Feedback from the delegates suggested this worked well and did not limit the experience. Sponsorship was required to cover the remaining costs and relied heavily on a good working relationship with Ethicon who supported the event.

The focus group suggested that a Consultant Faculty would be preferable. The debrief identified that initially, uptake by consultants was popular but closer to the event multiple drop outs occurred and senior trainees on the organising committee were required to be faculty. Overall feedback for the day was extremely positive and trainees identified the day as being beneficial to their training.

Conclusion
Cadaveric Training Days can be a valuable resource for surgical trainees. To be successful significant amount of planning is required to ensure the day is relevant, educationally robust and affordable to trainees.
The Dog Ate my Homework! Why Don’t Trainees Engage with Training in Their Own Time?

Bamford R, Rodd CD, Langdon I, Eastaugh-Waring S, Coulston J
R Bamford. HESW Simulation and Non-Technical Skills Fellow. Musgrove Park Hospital. Taunton. TA15DA

Introduction
The changing landscape of the NHS and the impact of the working European Working Time Directive have meant that alternative training must be adopted. One option available to trainees is self-directed learning. However, trainees frequently do not engage in these opportunities. We aim to identify the trainee’s perspective as to why this may be.

Method
First year Core Surgical Trainees were given access to at home laparoscopic trainers and had their use monitored. After three months, only 2 trainees had recorded any usage. The remaining trainees were invited to attend semi-structured interviews to discuss why the simulators had not been used. Established themes were investigated further with each subsequent trainee until saturation of ideas had been reached.

Results
Eight of the ten invited trainees attended for interview. All trainees professed a desire to take part in the self directed learning. The most common reason for not using the trainer was a perceived lack of time to complete and repeat each task. Trainees highlighted that they did not prioritise using the simulator over other extra-curricula activity that included writing articles, completing audits and revising for exams and they valued their social time. An additional theme was that trainees did not recognise the benefit to their own training and that the tasks were not considered relevant to their current training post; that either did not include or had limited access to laparoscopic work. A final theme was associated with a trainee’s anxiety with setting up the equipment and downloading the software onto their own computers. This anxiety appeared to reflect the challenges of setting the system up correctly as opposed to be unwilling to download unknown content.

Conclusion
Despite enthusiasm for extra curricula training, trainees were unable to prioritise its use over other activities. Trainees value their own time and in particular believed they already neglected their social life to concentrate on work commitments. Self-directed learning requirements should therefore be highly selective so as to limit this effect. These data suggest that for a self-directed learning project to be successful, trainees must identify with the benefit and relevance of the project so as to prioritise it over other activities.
The use of Virtual Patients in assessment of Postgraduate General Surgical Trainees – A Pancreatic Cancer model

N Walker, K Butcher, P Duncan, D Alder, R Bamford
N Walker, Year 4 Medical Student, Faculty of Medicine & Dentistry, University of Bristol, Senate House, Tyndall Avenue, Bristol, BS8 1TH.

Objectives
Virtual patients (VP) are a valuable method of e-learning and assessment of competencies, particularly clinical decision making. Using the Low-Fidelity (Lo-Fi) method of VP design, we created a peer-reviewed VP map model and assessed its value to surgical trainees in making clinical decisions in a safe environment.

Methods
A Virtual Patient map was created based on the case of a 65 year old male with undiagnosed pancreatic head adenocarcinoma. Decision making for trainees spanned from the patient’s initial GP referral through to palliative care involvement. The map was synthesised using specific mind-mapping software and the data placed into ‘action maze’ software known as Quandary, creating a fully interactive VP. Combined with our intent to create a patient avatar throughout the case using iClone, a realistic environment will be enhanced. At three intervals during the development, focus groups comprising of Surgical Trainees of varying levels and a Hepatobiliary Fellow critiqued the map, focusing on accuracy, fidelity and value of the decision stems.

Results
Trainees of all levels found the VPs to be valuable and the decision making challenging and rewarding. They identified the freedom to make the “wrong” decision and manage the consequence of this action as a valuable process for learning and that the feedback gained was essential. They reported that the scenario was realistic and suggested the development of supportive clinical supervision to be implemented into the programme for increased fidelity. The fellows found the map to be of most value as they would soon have to make the decisions as Consultants. All trainees identified VPs as a resource they would like more access to and agreed they would use regularly. The Fellows were found to be a vital resource for identifying clinical inaccuracies in the content of the map and ensuring the data was up to date.

Conclusion
Surgical trainees find VP’s to be a useful tool and is an area they would like more exposure to. It was found that our map is potentially useful for decision-making and assessment. Despite being in its initial stages, our intention is to incorporate the VP into the assessment process of general surgical trainees, revolutionising their assessment currently in the UK today.
Transition to Clinical Practice: a longitudinal study of the first year as a doctor

N Coakley, P O'Leary, M Horgan, D Bennett.
N Coakley, Clinical Tutor-General Medicine, Department of Medicine, Cork University Hospital, Wilton, Cork, Ireland. ncoakley@ucc.ie

Background and Purpose
Medical graduates face significant challenges in the transition from student to practitioner. Extensive international research demonstrates how this transition can be difficult for doctors\(^1,\)\(^2\). Key contributory issues identified include preparedness\(^3,\)\(^4\), bullying\(^5\) and mental health and wellbeing\(^6,\)\(^7\).

Less emphasis has been placed on achieving an understanding of the actual lived experience of the transition. This study aims to describe the experience of transition from medical school to clinical over the first 12 months of being a doctor. Findings will deepen the understanding of this key transition.

Methodology
This is a longitudinal qualitative study using an interpretive phenomenological approach. Fourteen medical graduates about to commence practice in July 2015 were recruited following purposeful selection on the basis of gender, graduate entry or otherwise. A semi-structured interview was held with each participant prior to commencing work in respect of their expectations of the experience of transitioning to clinical practice. A second interview will be held at the end of the first year of practice in June 2016. Each participant will keep an audio-diary relating to their experiences providing a minimum of three entries over a 12 month period. All data will be transcribed and template analysis\(^8\) will be undertaken to identify common themes in respect of the research question.

Results
Preliminary findings, based on the initial round of interviews and the audio-diaries will be presented.

Conclusions
This study will provide greater understanding of the experience of becoming a doctor. Findings may inform undergraduate and postgraduate curricular design as well as the implementation of appropriate supportive measures for this key stage of professional development.

References
Understanding more about sources of trainee bullying

P Kavanagh, S O’Hare
P Kavanagh, Director of Professional Development and Practice, Medical Council Ireland, Kingram House, Kingram Place, Dublin 2, D02 XY88

Background and Purpose
In 2014 the Irish Medical Council (the regulator of doctors in Ireland) highlighted that over 1 in 3 trainees felt they had experienced bullying behaviour in their training post. In a follow-up survey in 2015, the Medical Council asked trainees to identify the main source of any bullying, to give greater direction to our work in addressing bullying in clinical learning environments.

Methodology
In 2015 Your Training Counts, the Medical Council’s National Trainee Experience Survey, contained 5 questions on bullying - including one asking trainees to describe the main source of any bullying they experienced while in training. A range of statistical procedures were used to look for significant associations between trainees’ responses to items on bullying and other items within Your Training Counts, trainee characteristics (e.g. gender, age) and other contextual factors (type of clinical learning site).

Results
35% of trainees said they were bullied in post. Doctors were identified by trainees as the largest source of bullying in training environments (with 49% of all trainee perceived bullying coming from other doctors). Other sources of bullying included: nurses and midwives (36%), patients/patients’ relatives (8%), management (3%) and other health professionals (2%). Focusing only on doctors as sources of bullying, Consultants and GPs accounted for 48% of trainee bullying by doctors, with other trainees accounting for 32%, and doctors not in training accounting for 20%.

Sources of bullying varied for trainees at different stages of training. Consultants and GPs were named as the main source of bullying in 44% of all bullying experienced by Higher Specialist Training trainees, and in 9% of bullying experienced by intern trainees. While bullying from patients/patients’ relatives accounted for 8% of all sources of trainee experience of bullying, for GP trainees this source accounted for 21% of the sources of bullying.

Almost 7 in 10 trainees who experienced bullying in their learning environment did not report their experience to someone in authority. Of those trainees that reported their experience of bullying to someone in authority, almost 40% said that nothing happened. Trainees who felt action was taken when they reported their experience of bullying gave significantly higher ratings for their learning environments than trainees who perceived nothing to have happened when they reported their experience.

Discussion and Conclusions
Doctor-on-trainee bullying accounts for almost half of all perceived bullying of trainees in clinical learning environments. Understanding how different sources of bullying are associated with trainees at different stages of training gives the Medical Council more direction in its role of helping develop supportive learning environments for trainees.
Ward rounds: When Foundation Year 1 doctors take the lead.

M Redman, S Gajebasia, J Pearce, I McNeil
M Redman; Honorary Lecturer/Foundation Year 2 doctor, Hull York Medical School, John Hughlings Jackson Building, University of York, Heslington, York, North Yorkshire YO10 5DD; hy8mgr@hyms.ac.uk; 07944388340

Background
Foundation year 1 doctors (FY1s) may be expected to conduct ward rounds alone, without having received previous training on how to do this.¹ There are a number of aspects which are often forgotten when conducting ward rounds. Acknowledging human factors in the busy hospital environment with the use of a checklist may help improve patient safety and the quality of the ward round.²

Methods
We disseminated an online survey to all FY1s at North Lincolnshire and Goole NHS Foundation Trust inquiring about their individual experiences of ward rounds. We aimed to explore if it would be beneficial to produce a checklist, or an aide memoire, to be used by FY1s for ward rounds. We also sought to explore if FY1s would find a teaching session on conducting ward rounds useful.

Results
21 out of 45 FY1s responded. 81% said they led ward rounds alone twice or more each week and 89% said that they did not feel prepared to lead ward rounds. Respondents stated that a number of important aspects were ‘rarely’ considered during ward rounds, which included: nutrition, mobility, venous thromboembolism prophylaxis, ceiling of care and discharge planning. 79% said an aide memoire to remind them of aspects to consider on ward rounds would be useful/extremely useful. 84% said a teaching session on conducting ward rounds would be useful/extremely useful.

Discussion and Conclusion
Further work must be done to support FY1s leading ward rounds alone to allow for a safe, systematic and thorough ward round. Following feedback from our survey, an A4 sheet on ward round trolleys and a credit-card sized aide memoire for each FY1 suggesting aspects to consider on ward round have been implemented. We plan to run a teaching session on conducting ward rounds for FY1s. We plan to re-survey in Summer 2016.

References
Are Dental Graduates Prepared for Patients Questions about HPV?

S Hall, C Fleming, T Walker
S Hall, South Bristol Academy, University of Bristol, Bristol, UK

Background
Human papilloma virus (HPV) is a clearly established aetiological risk factor for oropharyngeal cancer and it has contributed to the significant rise in cases in the United Kingdom over the past two decades. The education of dental students must sufficiently address the subject to improve their preparation for practice and ensure they are well positioned to help provide health promotion and detect early stage disease. There is limited literature evaluating the knowledge and confidence of oral health professionals in educating the public about HPV related oral disease and furthermore the quality of education provided to dental students regarding HPV in their training. By acquiring views of current dental undergraduates we can assist in planning learning strategy on this topic.

Aims
This study aims to assess dental undergraduate awareness of and confidence in managing HPV related head and neck disease at a single UK institution.

Methods
Ethical approval was obtained via the University of Bristol. A questionnaire was distributed to all undergraduate dental students in the three clinical years of the undergraduate dental course (Years 3, 4 and 5 of the BDS programme) at the University of Bristol. Questions were included that related to knowledge of HPV and its transmission, to confidence in managing such cases and about dentist’s involvement in managing such cases. Results of the questionnaire were analysed.

Results
A response rate of 79% was attained (167 out of 211 students). Our students demonstrated good knowledge with relation to HPV and the knowledge was stable throughout the clinical years. Students’ confidence in discussing HPV with and advising dental patients was low with only small increases in confidence through the clinical years. The majority of students acknowledge that dentists should play a role in managing cases of HPV related head and neck disease and many expressed that they would like more teaching on the subject.

Discussion & Conclusions
HPV related oropharyngeal cancers can potentially be detected by dental teams and oral health professionals are in a position to educate the public about transmission of the virus. Dental undergraduates have good knowledge with regards to HPV related head and neck disease, however their confidence in communicating it to patients is poor. The results of this study can assist in planning an educational strategy for dental students to ensure future dentists are equipped to contribute in managing this disease.

“Are they really ready for professional practice?” The use of in-situ simulation in preparing Tomorrow’s Doctors

C Earnshaw, N Oxlade, Z Hossenbaccus, J Hawkins, YYS Ho, P Fletcher, CD Rodd.
C Earnshaw, Clinical Teaching Fellow, Gloucestershire Academy, University of Bristol, Gloucestershire Hospitals NHS Foundation Trust, Great Western Road, GL1 3NN

Background and purpose
The GMC found that F1s are largely unprepared for emergencies, especially out-of-hours in unfamiliar environments with a deteriorating patient and less senior support (1). The student to F1 transition is well recognised to place unexpected demands and stressors on the junior doctor and they are often expected to care for critically ill patients independently (1)(2). Accounts from F1s state delivery of this emergency care can be impeded by anxiety and acute stress (1).

Simulation is widely reported as providing a safe environment for students to practice resuscitation skills without exposing patients to risk (2). In-situ simulation takes place in the clinical setting (3) and has been shown to improve the realism of the scenario, reduces the participant’s feeling that they are performing (4) and better suits experiential learning theory than standard simulation (3). This study aims to establish whether in-situ simulation better prepares 5th year medical students for managing emergencies.

Methodology
Ethical approval from Bristol University was sought but deemed unnecessary. 5th year medical students (n = 29) at Gloucestershire Academy are randomly assigned to either in-situ simulation or standard lab-based simulation. Both groups undergo the same scenario and will manage a deteriorating critically ill ‘patient’. 3 sets of data will be obtained from both groups;

1. Prior to simulation: Pre-evaluation and State-Trait Anxiety Inventory (STAI) (5) questionnaires.
2. During simulation: Performance measures; time to record observations, time to initiate relevant investigations, time to commence treatment, time to recognise deterioration and time to diagnosis.

Later the groups will be crossed-over and the study repeated. Qualitative data will undergo content analysis and statistical analysis will be applied to numerical data.

Results
Results from STAI, performance measures and evaluation questionnaires as well as qualitative data from semi-structured interviews will be presented at ASME.

Discussion and conclusions
Rigorous evaluation of in-situ simulation is scarce but some studies have demonstrated its positive impact on learning (6). Following the GMC’s (1) review demonstrating a negative impact on the delivery of emergency care by anxious F1s, educators must urgently develop an improved method of better preparing 5th year medical students for this transition. We propose that reproduction of these feelings of anxiety and acute stress through in-situ simulation will help address these issues.

References:
Gynaecology Teaching Associates (GTAs): Do they make a difference?

A Tyler, F Hodge, E Kevelighan
A Tyler, Teaching Registrar, Dept. Obstetrics & Gynaecology, Singleton Hospital, Swansea, SA2 8QA

Background
GTAs are used widely across North America, Australia and Scandinavia. The UK has been slow to incorporate them into undergraduate teaching. GTAs were introduced into the Swansea University Graduate Entry Medical Programme in October 2014. GTAs teach medical students the practical aspects of speculum and internal pelvic examinations, in addition to the communication components of intimate examinations. The evidence suggests the use of GTAs improves communication used by students, as well as their practical proficiencies (1).

Method
A questionnaire was distributed to all the Gynaecology Consultants and Registrars working in Singleton Hospital, Swansea. It asked whether they felt that students’ performance of gynaecological examinations had improved in both the clinic and theatre setting, following the introduction of the GTAs.

Discussion and Conclusion
It is difficult to quantifiably and objectively measure whether an improvement has taken place. It is also difficult to use patients to assess this. This study therefore is largely a subjective assessment on a local level. However, despite this, as with postgraduate workplace based assessments, the views of the assessor/supervisor of skills and competence form a significant portion of feedback and ability to progress. Therefore, we would consider their assessment a reasonable one.

In conclusion, students appear to gain from GTA exposure which is reflected in the clinicians’ views on student performance since their introduction. We would advocate the use of GTAs across undergraduate gynaecology teaching in the UK, and would take this further to consider their use in clinical induction programmes for new junior doctors commencing a gynaecology rotation.

References
Handover Whispers – A Novel Approach to Handover Teaching

M Freeman, E Hampton, D Smith, B Hale
M Freeman, Trauma Fellow, Royal Infirmary of Edinburgh, 51 Little France Crescent, Edinburgh, EH16 4SA

Background and Purpose
Handovers are an important part of Foundation doctors’ work\(^1\). However handover of care can be one of the most perilous procedures in medicine. Current literature highlights the challenges junior doctors face, often lacking in confidence and perceived competence in this skill\(^2,3,4\). Integration of ‘handover’ teaching into undergraduate curricula is widely supported\(^5,6\). Anecdotally, students report learning about the ‘handover process’ in undergraduate education but struggle to apply this clinically. We developed an innovative teaching approach to help Foundation doctors consider handovers not only as a transfer of information but an analytical, professional process where information is prioritised and communicated.

Methodology
As part of Foundation lunchtime teaching, participants were arranged in rows and invited to play ‘Handover-Whispers’. A written medical handover was presented to those sitting in the front row. Their interpretation of the case was delivered to participants sitting behind them in their row by verbal handover. When the handover reached the back, the last member presented the final version of their case to the entire room. This ensured that every participant had the opportunity to both deliver and receive a handover. Reflective discussion identified key details from the original medical handover and compared it to the version eventually delivered by the group. Focus groups were then used to gather qualitative data on individual experience of the handover process, both in clinical practice and during ‘Handover Whispers.’ Participants then completed a feedback questionnaire for the session.

Results
Forty nine foundation doctors participated across two sessions and provided evaluation. ‘Handover-Whispers’ was found to be “thought-provoking,” “interactive” and “very useful”. Use of ‘headline’ or ‘take-home’ messages were identified as key themes, as was the importance of including important objective information. Common difficulties shared by foundation doctors were identified in the focus groups such as requiring an adequate knowledge of the patient or expectations when contacting certain specialties. Foundation doctors felt the process of ‘receiving’ a handover particularly useful for identifying common potential pitfalls.

Discussion and Conclusions
Initial results suggest an increased understanding and appreciation of the challenges around handover through participation in this practical session. This programme has been developed for final year medical students participating in their student assistantship prior to clinical practice. Further quantitative data is now being collected from this cohort to further assess its efficacy at improving student experience, understanding and confidence during the handover process. Our proposed framework may further inform multi-disciplinary teaching of interpersonal communication and handover.

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Paper withdrawn
“Lights, Camera and…. Education!” Professionalism for 3rd year medical students – can cinemeducation change this from a chore to a more effective learning experience?

Z Hossenbaccus, C Earnshaw, J Hawkins, YYS Ho, P Davies, C D Rodd
Z Hossenbaccus, Clinical Teaching Fellow, Redwood Education Centre, Gloucestershire Royal Hospital, Great Western Road, GL1 3NN

Background and Purpose
Medical professionalism forms the basis of the contract between doctors and society, as affirmed by the General Medical Council’s guidance in ‘Good Medical Practice’\(^1\). Therefore, it is imperative that Professionalism is incorporated into medical undergraduate education. At present there are no guidelines on how Professionalism should be developed in medical students\(^2\). Students identify role modelling as an important modality for learning Professionalism while lectures on Professionalism alienate rather than inspire them\(^3\). This study looks into the use of short films as a way of establishing the cognitive base of Professionalism and reflective practice.

Methodology
Two films were produced by the Medical Education Faculty at Gloucestershire Academy (University of Bristol). They illustrate poor examples of Professionalism in a simulated clinical environment with actors as the multidisciplinary team. A cross over study was carried out with 3\(^{rd}\) year medical students: half received teaching using the film while the other half received traditional lectures, both having the same learning objectives. The two groups were later crossed over. Qualitative data was collected on the students’ engagement, enjoyment and confidence with Professionalism using the two teaching methods. Data was also collected on students’ reflective practice on Professionalism by means of an online diary.

Results
The film as a teaching method for Professionalism was well received. Students felt that they gained new knowledge from the film compared to lectures despite the learning points being the same. The film encouraged them to participate in discussion, allowed them to remember key learning points and increased their confidence in facing the clinical environment in a professional manner. 87.5% of students preferred the film as it was easier to relate to and portrayed ‘real-life’ situations. However, there was no conclusive evidence to suggest that it encouraged reflective practice.

Discussion and Conclusion
Role modelling and personal reflections, ideally guided by faculty, are held to be the most effective method of developing Professionalism\(^4\). Professionalism needs to be introduced explicitly using definitions and outlining it as a list of characteristics\(^5\). Students need to understand the nature of Professionalism, the reason for its existence, its characteristics and the obligations to sustain it. These facets form the cognitive base of Professionalism. It is important that students engage and enjoy the teaching so that they are able to use it as the foundation to further develop their Professionalism by role modelling, reflections and continuity of experience. Cinemeducation can be used as a more effective means of delivering the cognitive base of Professionalism. This form of teaching is more engaging, enjoyable, memorable and triggers discussion – all building blocks to helping students on their journey to maintaining good professional behaviour.

References

342
Identification of the medical student in the clinical setting

Rooney R, Schofield J, Chisman R, Morgan J
R Rooney, Clinical Teaching Fellow, North Bristol Academy, University of Bristol, North Bristol NHS Trust, Learning & Research, Southmead Hospital, Bristol, BS10 5NB

Background and Purpose
It is good medical practice for medical professionals to introduce themselves to their patients and this is applies equally to medical students. However, a lot of patients and relatives also rely on non-verbal clues to aid identification. It may be that, on seeing a stethoscope being worn, patients assume that they are speaking with a doctor, supported by one study which reported that 2% of relatives said they consider wearing a stethoscope an important factor in helping to identify their attending doctor. Most NHS trusts require hospital staff to wear an identification badge with the name and photograph. There are multiple studies which have shown that badges worn by hospital staff can be confusing for patients. One recent study specifically identified confusion when identifying doctors within teaching hospitals. Medical schools use different methods to further aid identification of their students. At the University of Bristol medical students wear lanyards around their neck with the phrase ‘medical student’. These were introduced following a study carried out at South Bristol NHS Trust “Medical Student Identification: Removing anonymity”. The medical students from the University of Birmingham wear a white and green badge containing their name, University of Birmingham and the title ‘medical student’. We would like to compare these methods of visual identification of medical students and consider other factors that might influence incorrect identification.

Methodology
We plan to interview patients at two sites, North Bristol NHS Trust and Walsall Healthcare NHS Trust, where University of Bristol and University of Birmingham medical students attend respectively. We will ask patients to identify the hospital staff from a set of 12 photographs, without specifying the research is regarding medical students and giving reasons for their choice. This will be followed by a questionnaire regarding medical students and who the patient thinks wears a stethoscope around their neck.

Results
We will compare the number of medical students correctly identified between sites. The reasons for incorrect identification will be analysed using thematic analysis.

Discussion
We anticipate the study will shed light on how often medical students are mistaken for other hospital staff and potential reasons for this. We hope that by comparing two different visual aids we might be able to suggest which is more effective and consider methods for improvement.

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Using a pre-arrival task to encourage first year students’ engagement with professionalism: Its feasibility and impact

Cairns L, Lynch S, Timm A
Timm A Medical Education Unit, Faculty of Medicine, University of Southampton, B85, Highfield Campus, University Road, Southampton SO17 1BJ.

Background and Purpose
Firm guidelines have been put forward on professional outcomes and standards in medical education\(^1\), yet there is no agreed model for teaching professionalism\(^2\). Following a curriculum re-design in 2013/14, Southampton medical school introduced a programme of personal and professional development (PPD) in the early years. A pre-arrival task was introduced in 2014/15 to encourage students to research and document what kind of doctor they would like to be and what they think it means to be a medical professional. Pre-arrival tasks are increasingly used in Higher Education to help students prepare for the transition to university\(^3\), although to our knowledge this was the first time that a pre-arrival task has been used in a UK medical school. The early feedback from students in 2014/15 was positive and the PAT was re-run in 2015/16. This research explores the student experience of the PAT, looking at whether completing the PAT was feasible, the task itself, how participants approached the task and any impact it had.

Methodology
All first year students on the BM5 programme at Southampton University were eligible to participate. A total of 22 students participated, with a mix of graduate entrants (GE, n=9) and undergraduate entrants (UE, n=13). Four focus groups were conducted, ranging in length from 42-77 minutes. With participants’ consent, the focus groups were audio-recorded and transcribed. The data was analysed thematically.

Results
The task was feasible for most students, with the exception of 2 participants who had issues with timing. Many participants were unsure about what was expected of them, although GEs were less worried than the UEs. GEs tended to approach researching for the PAT with articles and material from the GMC, whereas UEs sought advice from family and the University website and often struggled to meet the required length. The impact of the task was more prominent for UEs: helping them to re-focus on studying, gain greater understanding into professionalism and the importance of it as future doctors. Ultimately, the PAT was considered more helpful for UEs.

Discussion and Conclusions
There appear to be differences in how UE and GE students understood what was expected of them, how they approached the task, and what they took away from it. This suggests that there may be some important differences in how UE and GE students engage with professionalism teaching when they arrive at medical school.

References
Using Clinical Debrief sessions to promote Professional Identity Formation

D Walters, R Farrington
R Farrington, Clinical Lecturer, Room 1.301, Stopford Building, Manchester Medical School, University of Manchester, Oxford Road M13 9PT

Background and Purpose
Professional Identity in medicine describes the feeling of "being" a doctor, a subjective process key for medical students to successfully assume this role at the end of their undergraduate medical education. It comprises a complex process of learning, self-reflection, critical thinking and emotional exploration [1], [2].

Clinical Debrief (CD) sessions in Year 3 (Y3) at the University of Manchester total 16 hours discussion in small groups over 7 consecutive weeks and are evaluated by the students as useful to learning. Students reflect upon their own clinical experiences, dilemmas and learning from the preceding week. Communication with peers, seniors and patients is dissected and their behaviour described in terms of professionalism. The interface between primary and secondary care is explored. They are fluid sessions and the trained GP tutors are encouraged to follow cues from students. These facilitators encourage self-awareness, Clinical Reasoning and respectful challenge. A doctor's role and their social contract [3] are debated using lay perceptions and coverage from the media of hot topics. A holistic view of the patient journey is undertaken whilst exploring the emotional challenges for the patient, medical professional and student.

Methodology
This quantitative project measures the professional identity formation of Y3 medical students, using a validated questionnaire designed by Crossley and Vivekananda-Schmidt [1]. It comprises nine questions and was completed at a point in Y3 when half of the cohort had undertaken CD in order to compare results between those who had and had not yet experienced this group work. The analysis includes indication whether differences occurred by gender, or whether students had entered clinical years directly from another pre-clinical course, or following intercalation for a further qualification.

Results
Results of the study will be presented and discussed on the poster with reference to contemporary literature on Professional Identity formation.

Discussion and Conclusions
This project explores professional identity formation in an undergraduate medical degree course. It evaluates the impact of facilitated supervision following sessions where the well-being of clinical students is considered in parallel with their understanding and demonstration of professionalism. This component of the programme is being extended in 2016-17 and the results offer an opportunity to explicitly highlight professional identity formation in further detail with future students.

References
Development, standard-setting and validation of checklist-based assessment of simulated intercostal drain performance

E Hampton, J Tiernan, S Edgar
E Hampton, Clinical Teaching Fellow, Medical Education Department, Royal Infirmary of Edinburgh, 51 Little France, Edinburgh, Scotland.

Background and Purpose
The paramount importance of patient safety has shifted the focus of postgraduate training curricula to competency-based assessment. Recent advances in simulation technology have enabled evaluation of high-risk procedural skills in safe environments with no risk of patient harm. Recognition of this has prompted incorporation of simulation-based learning (SBL) as a means of assessment into such curricula\(^1\). In parallel, new GMC guidance mandates provision of SBL opportunities by clinical education providers\(^2\).

NHS Lothian has been developing the ‘Mastery Programme’ a simulation-based mastery learning (SBML), quality assurance and patient safety initiative aimed at ensuring all relevant trainees demonstrate an acceptable standard of simulated performance of intercostal drain, central line and lumbar puncture. Translational science evidence supports improvements in real-life skills performance and, most importantly, patient outcomes via this methodology\(^3\).

Fundamental to inferences of trainee competency are the validity and reliability of the measurement tool used. We therefore wanted to develop and validate checklist-based assessment to measure simulated performance of such skills, firstly intercostal drain insertion.

Methodology
A 20-item checklist was developed using relevant guidelines and expert consensus. Four experts from the locality (2 respiratory consultants with special interest in pleural procedures and 2 clinical teaching fellows from respiratory specialist training grades) applied the modified Angoff method to this checklist to create a minimum passing score. Validity will be assessed initially through external review and expert consensus. A Delphi method will be utilised to reach agreement on the key items to be included. Inter-rater reliability will also be assessed utilising a video technology.

Results
A mixture of quantitative and qualitative data will be presented.

Discussions and Conclusion
We hope to develop a checklist that is rigorous, reliable and externally validated to ensure the inferences about trainee competency following this simulation-based mastery learning programme. This will allow the programme to expand and potentially be used across multiple regions. It will also pave the way for further research into areas such as skill decay and re-training requirements to ensure optimal patient care in the long term.

“It is not the easy option people think it is.” Improving the experience of healthcare students living in the family home whilst studying

S Calvert, D Burns, Speed, P Fisher
P Fisher, Universty of Manchester

Background
In recent years, an increasing number of students in the UK have chosen to live at home whilst at University\(^1\). Financial pressures\(^2\) and a desire to maintain the support mechanisms of family and friends\(^3\) have both been cited as possible explanations for this trend, and there is evidence that gender, ethnicity, school performance and disability all affect the likelihood of a student choosing to live at home\(^1\).

We recognised that the experience of live at home students may be very different from those of their classmates, and were concerned by evidence suggesting higher non-continuation rates\(^1\). We therefore decided to explore the needs of live at home students in the schools of nursing, midwifery, social work and medicine in order that we might to design interventions to improve our students' experience of being at University.

Methods
Students who were living at home were invited to take part. Four focus groups were held, including 13 nursing and 18 medical students.

Data was transcribed and themed using a framework analysis approach.

Results
Nursing students who participated were predominantly mature, white British students, whereas medical student participants were mostly BME school leavers. For both, the most common reason cited for choosing to live at home was financial pressure, with caring responsibilities and family pressures also quoted.

Themes emerging from the discussions were common to medical and nursing student participants.

Live at home students reported feeling different to their peers living on campus from day one of their studies, when welcome week events focused on late night alcohol based socials. Pressures of managing competing commitments was felt by most, with many juggling family commitments, long journey times and for the older students particularly, part-time work maintained to meet financial pressures. As a consequence live at home students reported a sense of social isolation and were concerned that they were missing out on informal study support from classmates.

Follow up intervention
Following suggestions from focus group participants, we ran two events (medical and nursing) to enable live at home students to meet up at the start of their programme of study, to help them establish a social support network. In addition, for the first time ever the first social event for new medical students was in an alcohol free venue.

Evaluation
We will present student views on our intervention and lessons learned.

References
Can performance in multiple mini-interviews and situational judgement tests predict first year performance in medical school?

Shaw JA, Mackenzie RK, Cleland JA, Husbands A
Shaw JA, MBChB and BSc MedSci Student, MBChB Office, Suttie Centre, Foresterhill. Aberdeen, AB25 2ZD

Background and Purpose
The tools used for selection of medical students have come under scrutiny over recent years.\(^1\) Multiple mini-interviews (MMIs) have demonstrated reliability and predictive validity when used in undergraduate medical selection processes.\(^2, 3\) Despite this, it is essential that further evidence using medical students of different cohorts and schools is gathered before advocating its widespread use as a selection tool.

Situational Judgement Tests (SJTs) have been proposed as a method of objectively assessing non-cognitive attributes—such as integrity—in undergraduate medical applicants.\(^1\) SJTs have shown acceptable reliability and predictive validity in other employment fields, as well as in undergraduate medicine in other countries.\(^4\) However, their use as a standalone tool is a novel concept in medical admissions in the UK. This study aimed to explore the predictive validity of MMIs and the reliability and predictive validity of a pilot integrity-based SJT.

Methods
Admissions data were collected for all students who underwent the 2012-13 admissions cycle and matriculated at Aberdeen or Dundee Medical School in 2013 (n=161 and 105 respectively). The predictive validity of the Aberdeen and Dundee admissions-MMI were assessed by comparing student performance on these with Year 1 examination performance. The Aberdeen cohort was also invited to pilot a newly-developed pre-admission SJT whose reliability and predictive validity were determined by comparing retrospectively with Year 1 examination data.

Predictive validity was assessed using correlation statistics and multivariate multiple regression analyses. Reliability was determined using Cronbach’s alpha.

Results
Univariate analysis showed MMI performance to correlate moderately with first year OSCE performance (r\(_{12}=.37; p<.001\)) and accounted for up to 9.1% of the variance in Year 1 OSCE scores. No significant correlation was found between MMI and written examination performances. 83 medical students undertook the pilot SJT. The SJT was found to demonstrate acceptable reliability (\(\alpha=.61\)). SJT performance did not correlate with Year 1 examination results; however, it was found to negatively correlate with pre-admission academic performance (r\(_{13}=-.33; p=.041\)).

Discussion and Conclusions
These findings add to the growing body of literature that well-designed MMIs are predictive of OSCE performance. Its relationship with later undergraduate and postgraduate examination performance—both written and clinical—must be explored. SJT, as hypothesised, did not correlate with early undergraduate performance. However, its negative correlation with pre-admission academic achievement suggests it is indeed measuring a distinct non-cognitive attribute. More robust research is required before SJTs can be fully integrated as a high-stakes selection tool within undergraduate medicine.

References
Dare to Doctor: Four years of an access to medicine summer school in Swindon.

R Holman, A Woodman, H Luckhurst, F Bold, K Jones.
R Holman, Clinical Teaching Fellow, Swindon Academy, Great Western Hospital, Marlborough road, Swindon, SN3 6BB

Background and purpose
Medicine is consistently one of the most competitive university courses, with an average of 11.2 applicants per place in 2013. In recent years, emphasis has been placed on the need to recruit medical students from a diverse range of backgrounds, in order to train the best doctors. Swindon Academy at the Great Western Hospital has established the Dare to Doctor summer school programme, now in its fifth year, to encourage and support local students considering applying to study medicine.

Methods
The three day course includes clinical shadowing, workshops, skills sessions and interview practice. In 2012, a pre and post course questionnaire using a 5 point scale was used to assess their understanding and confidence in applying to medicine. Mean scores before and after were calculated and compared. In the successive three years, feedback was obtained through a post-course evaluation questionnaire using a semantic differential scale of 1 – 10 and free text boxes for qualitative data.

A follow-up online questionnaire has been sent to previous course attendees from 2012 – 2015 in November 2015. It aims to identify whether they applied for medicine or not, whether they were successful and whether they felt Dare to Doctor had any impact on their decision and application. It combined questions on a 5 point Likert scale and free text boxes. A modified version of the questionnaire was sent to the 2015 cohort in light of the fact they would not yet have all received responses from universities. A further follow up questionnaire will be sent to this cohort in April 2016 following completion of the application cycle.

Results
The feedback from previous courses has been overwhelmingly positive. In both 2015 and 2014 the mean overall rating of the course was 9.1 on the 10 point scale. In 2013 it was 9.32. Each year the clinical shadowing and mock interview aspects of the course have proved most popular.

The results of the follow up questionnaire are awaited. They will be analysed and standard T test applied.

Discussions and Conclusions
The success of our course demonstrates the role district general hospitals can play in supporting and encouraging local students applying to medicine whilst forming links to the local community. The concept and structure of the Dare to Doctor course is transferrable to other hospitals.

Further conclusions will be drawn based on the results of the follow up questionnaire.

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Encouraging wider participation in medical education: Listening to school students

N Wyatt, B Beska, G Wood, A Martin, A Codd, GHS Vance, B Burford
B Burford, Lecturer, School of Medical Education, Newcastle University, Newcastle, NE1 7RU

Background and Purpose
Under-representation of some social groups in medicine is an international concern. In the UK, medical students are disproportionately drawn from more affluent socio-economic groups; figures which remain relatively static. The issue is not just one of selection, but of recruitment – there is under-representation in those who apply for medicine. Medical schools must therefore identify ways to overcome deterrents to application as well as ensure selection processes are equitable. This project aimed to identify how medical schools and other stakeholders can encourage applications to medicine from these groups.

Methodology
The project drew on principles of participatory design. Activities including card sorting and group discussions elicited potential medical students’ views of deterrents to studying medicine, and how they may be overcome. Outputs comprised sorted cards, written materials and discussion transcripts.

Activities took place during Medicine and Dentistry days (‘MaD Days’) at Newcastle University. These annual events for school students in Year 9 (aged 14-15) and Year 12 (aged 17-18) involve a number of didactic and practical sessions. Specifics of the research sessions varied for Year 9 and Year 12, but the overall format was similar: the first session identified potential deterrents to applying to medical school, the second potential interventions that would increase their likelihood of applying, and the third focused on the specific role of Newcastle University.

Results
Students came from a range of schools, but 20% met ≥3/5 criteria of WP status recorded on MaD day applications. Content analysis of session outputs identified common deterrents and suggested solutions.

Many deterrents related to a lack of information: about the application process, financial support, how to access work experience, and career opportunities. Some students were less clear than others about their information needs, making navigation of available resources more challenging. While information is available online it could be better integrated. Visits to the medical school were useful, but visits by medical students and junior doctors to schools were equally important, and could have additional benefit in terms of accessibility. Meeting and hearing from students from similar backgrounds was important for those who did not identify as typical medical students.

Discussion and Conclusions
Medical schools are a primary source of information, and so are well placed to improve coordination and signposting of information required by students of all backgrounds. Visits and outreach should aim to involve students from underrepresented backgrounds to provide first-hand accounts of student experience.

References
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Engagement, Resilience and Independence in Junior Medical Students

B Coull and A Jack
A Jack, Senior Lecturer, School of Medicine, Medical Sciences & Nutrition, University of Aberdeen, Foresterhill, Aberdeen, AB25 2ZD

Background and Purpose
The MBChB degree is an intense programme and many students struggle with the pressure despite strong academic ability. The medical student population is a diverse community made up of school leavers and graduates, from both affluent and less privileged backgrounds. We sought to identify differences in engagement, resilience and independence between different cohorts of junior year medical students to better inform where student support may be most needed.

Methodology
Consent to use academic data was obtained from Year 1 and 2 students (n=341) on entry to the MBChB programme at Aberdeen. A quantitative study was carried out, using SPSS and Mann Whitney U tests, to compare the performance of graduates vs school leaver students; male vs female students; traditional vs Widening Access (WA) students; and those repeating an academic year vs the main cohort.

Results
Year 1 school leavers required significantly more formal support (p<0.05), showed less engagement with formative tests (p<0.05), had a greater number of absences and weaker academic performance (p< 0.05) compared to graduates, but these differences disappeared by year two. Repeating students had a greater number of absences, completed fewer online quizzes and remained academically weaker when compared to the main cohort (p<0.05). No statistical difference was found between males and females, or traditional and WA students.

Conclusions
The differences between school leavers and graduates suggests greater levels of maturity, life experience, coping mechanisms and effective study techniques in the latter. However, our findings suggest that these differences do not persist, supporting the findings from other populations of medical students and indicating there is no evidence for preferential recruitment of graduates to standard medical school programmes. Notable, but not unexpected, is the limited engagement and high number of absences in repeating students suggesting these criteria may be useful in identifying students at risk and in need of greater support.

References
From medical student to widening participation fellow – views of a widening participation teaching role.

J Azmy
J Azmy, School of Medicine, Stopford Building, The University of Manchester, Oxford Road, Manchester, M13 9PT

Background and purpose
Widening participation (WP) is vital to encourage students from underrepresented groups to enter the medical profession. Students from lower socioeconomic groups perceive medical school to be for ‘posh’ students and underestimate their chances of being accepted into medicine (1). These perceptions and other barriers must be overcome to allow talented students from all backgrounds the opportunity to become a doctor (1). As part of the University of Manchester’s WP work, intercalating medical students can apply to become a WP fellow alongside PhD students in all disciplines. WP fellows strive to inspire students and encourage them to consider university.

Methodology
As a WP fellow I delivered interactive workshops and events for local school pupils from low participation neighbourhoods around Greater Manchester. This has included delivery of medicine taster sessions for Looked after Children, ‘Why study healthcare’ days, research skills workshops, and a ‘Scrubs’ day, where GCSE pupils were taught basic surgical skills, and learnt about the medical school application process. Events are tailored to the year group and are undertaken both on the university campus and in schools. A total of 80 hours of WP work will be completed over the year.

Results
So far over 160 students, from 15 different schools, have attended the WP events and pupils have ranged from Year 8 to Year 12. Evaluations indicate that students enjoy the events and are more likely to consider going to university following attendance. 75% of pupils who attended the ‘Scrubs’ day strongly agreed that they have a better idea of what they need to do if they wish to go to university to study medicine. Pupils enjoyed the research skills workshop, with the extremely positive qualitative feedback, indicating that students left with a greater enthusiasm for research.

Discussion and conclusions
The delivery of events by WP fellows provides pupils from underrepresented groups a vital opportunity to meet medical students, challenging their perceptions, and allowing them to explore university. As a WP fellow I have been privileged to work with young people and have developed many skills, including communication and presentation skills, necessary to become a good doctor and teacher. The role has encouraged me to work harder and pursue teaching roles in the future. A WP fellow scheme, not only benefits school pupils but medical students, hopefully making them better doctors in the future.

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Teaching About Specific Subjects
Can a 13-minute video on Human Factors increase the effectiveness of Simulation Training for Trainees?

I Pankhania, C Hogan, P Walker, E Smithers, C Curtin
I Pankhania, Medical Education Fellow, Barking Havering and Redbridge University Trust

Background and Purpose
In 2005, following the death of his wife undergoing routine sinus surgery, Martin Bromiley investigated the cause of his wife’s death. His line of enquiry led him to the conclusion that the cause was not the failings of individual clinicians but human factors\(^1\). He created a short 13-minute video, called ‘Just a Routine Operation’, outlining the case and the role human factors had to play in this case. He goes on to explain the role that effective Crisis Resource Management (CRM) has to play in the aviation industry and how this could play a role in the National Health Service (NHS).

There are 15 main CRM points developed by Rall and Gaba\(^2\). The purpose of this study is to gauge the effect that this video has on confidence with managing Human Factors and whether this video could be used in isolation to emphasise these factors.

Methodology
The trust has 142 Core Medical and Foundation Year Trainees for whom a Simulation-based Learning Event is provided. For each group, the Simulation Director gives a standardised introductory presentation. The cohort has been split into 2 groups, one allocated to watch the ‘Just a Routine Operation’ video in addition to the introductory presentation and one allocated to just be given the introductory presentation. The groups will all be given a questionnaire at the beginning of the session to gauge their confidence with regards to the Crisis Resource Management (CRM) points. Following the simulation training day, the candidates will then be given a second questionnaire asking them the same question and gauging any change in their confidence with regards to these points.

Following this a follow-up questionnaire will be given to assess the long-term retention of this knowledge of CRM.

Results
So far, 72 out of the 142 candidates have been through the simulation training. The research is ongoing and further data is still to be collected. The final data is due to be collected by the end of May.

Discussion and Conclusions
The results hope to show that Simulation-based training in conjunction with the ‘Just a Routine Operation’ video has greater impact on a trainee’s confidence and long term retention of knowledge, with regards to Crisis Resource Management, than Simulation Training without it. If shown to be effective, this video could be used to teach the role of Human factors and CRM to a larger variety of NHS staff without the resources and expenditure of simulation based training.

References
First Year Specialist Trainees Value Cadaveric Surgical Training

R Bamford. HESW Simulation and Non-Technical Skills Fellow. Musgrove Park Hospital. Taunton. TA15DA

Introduction
A number of factors have affected the ability of surgical trainees to develop the technical skills and gain exposure to cases that are required for specialist training. One way to develop the required skill set is through simulation, however, many of the basic and complex computer aided models do not adequately develop the skills and knowledge required to perform a procedure. Cadaveric training offer the opportunity to develop both the skills and knowledge of performing procedures with all the benefits of other simulated training. We aim to assess the value of cadaveric training for first year specialist trainees.

Method
24 newly appointed specialist trainees in General Surgery from the South West attended a cadaveric training day at the Vesalius Clinical Training Centre in Bristol. During this day trainees were exposed to the basic principles of 7 common surgical procedures and practical exposure to performing these operations on human cadaveric specimens. Trainees were asked to complete a post-course feedback and assessment form that utilised a 5-point Likert scale and free text, which were later analysed.

Results
24 trainees attended the day and 19 trainees returned completed feedback forms that were used for analysis. 9/19 (47%) had moved to specialist training directly from core training. As a result of the cadaveric training day, 32% (6/19) reported that they witnessed procedures they had never seen before and 26% (5/19) reported that they were able to perform a procedure they had never done before. 95% (18/19) strongly agreed that using cadaveric material was useful for developing skills specific to each procedure and was more beneficial than other simulator models available. 95% of trainees agreed that the day was relevant to their training and their role. 15 trainees (79%) reported an increased confidence for being on call after cadaveric training and 95% (18/19) strongly agreed that cadaveric training was useful preparation for the workplace. Trainees free text feedback suggested this was the most useful technical skills session they had ever participated in and identified the safe and highly supportive environment with senior faculty as key factors for its success.

Conclusion
Cadaveric training can expose them to procedures that they have not previously experienced. Trainees value safe, realistic cadaveric training highly and believe it to be beneficial to their training.
From diagnosis to death – Multidisciplinary palliative care simulation for medical and nursing students

J Hartland, F Bold, K Jones
J Hartland, Clinical Teaching Fellow, The Academy, Great Western Hospital, Marlborough Road, Swindon, Wiltshire, SN3 6BB

Research question
Can a sequential series of simulations following a patient’s journey form diagnosis to death improve medical and nursing student’s confidence in caring for patients at the end of life?

Introduction
This project aims to improve undergraduates experience and confidence in the diagnosis and management of the palliative patient through combination of simulations and tutorials following one patient in 6 months of their life, from diagnosis to planned death. Effective palliative care is delivered in the multidisciplinary team setting (MDT) and this project gives nursing and medical students an experiential learning opportunity to expand their knowledge of one another’s roles, improving the effectiveness of the MDT. The General Medical Council (GMC) set out in Good Medical Practice that a doctor “must make sure you [the doctor] understand…the roles and specialist skills of other health and social care team members”¹, therefore the learning outcome of this session can be directly mapped onto GMC guidance and thus improvements in patient safety and care.

Methodology
Groups of up to 8 nursing and medical students will be given 4 scenarios over the course of an afternoon. Pre-simulation confidence and knowledge will be tested via questionnaires to gain baselines, and will be repeated at the end of the afternoon session. This will form a subjective and objective assessment in confidence and knowledge improvement, which will be subject to statistical analysis.

Primary subjective confidence assessments will used well establish Likerts scale, and a small focused quiz will form the basics of an objective assessment of the students core knowledge. Anonymised follow up questionnaires will look at how this teaching has impacted the student’s experience of their placements and their interaction with patients reaching the end of their life.

Results and discussion
Results are not currently available, but will be complete by June 2016. The hypothesis is that this teaching experience will not only improve the student’s knowledge of palliative care and the management of terminally ill patient, but that the student’s understanding of one another’s roles will improve. It is theorised that with this greater understanding the strength of the multidisciplinary team is improved, moving us closer to gold standard palliative care delivery, improving patient care and safety. The data will be subject to a 2 tailed paired Student’s T-Test to show statistically significant improvements in knowledge and understanding. Further to this white space questionnaires will provide a qualitative look at changes in behavioural practice in the ward environment.

References
Healthcare Professionals Learning Intravenous Fluid Therapy: A Scoping Literature Review

McCrory R, Gormley G, Maxwell AP, Dornan T
R McCrory, Centre for Medical Education, Queen’s University of Belfast, Lisburn Road Belfast BT9 7BL and Regional Nephrology Unit, Belfast City Hospital, BT9 7AB

Background
Intravenous (IV) fluid therapy is a frequently performed task shared amongst medical and nursing professions. Adverse events from inattention to water or electrolyte management are common and result in patient harm(1). Reasons for this include poor levels of knowledge to safely prescribe, administer or monitor effects of IV fluids or electrolytes, and inadequate training of health professionals to carry out this task at undergraduate and postgraduate level(2). Our purpose was to map critically the literature describing how healthcare professionals learn to perform IV fluid therapy and what measures of this performance in practice exist.

Methods
A scoping review helps broadly and rapidly examine previous research activity in the larger literature landscape. It was conducted using methodology outlined by Arksey and O’Malley(3), and enhanced by Levac(4). After framing the review question, an electronic search strategy of academic databases and relevant grey literature sources yielded 1012 publications from 1994 to October 2015. After application of appropriate inclusion and exclusion criteria to titles and abstracts, a total of 71 articles were selected. Extracted findings of these reports went into a data collection chart; from these, themes were analysed, developed and discussed.

Results
While healthcare professionals regard IV fluid therapy as an integral part of patient management, they display wide variation in knowledge about fluid and electrolyte balance and the constituents of commonly used IV crystalloid solutions. Using tools such as fluid balance charts is hampered by competing ward activities, limitations in knowledge to use them and attitudes towards their completion. Prescribing performance by doctors varies by geography, specialty and clinical experience. Individually tailored prescriptions to relevant parameters such as patient weight in adults is rarely done. Selection of maintenance IV fluids in children appears to follow historical notions of fluid therapy that current evidence now contends, heightening the risk of fluid related complications. Educational interventions often focus on enhancing practitioner knowledge about fluid and electrolyte balance rather than the execution of the task; changes in performance of IV fluid prescribing are variable, and there is no description of the wider impacts on patient outcomes.

Conclusion
IV fluid therapy is a complex task situated by locality, clinical context and historical patterns of practice. The firm emphasis on the acquisition of knowledge in current educational interventions appears insufficient to foster safe and effective practice.

References
How do foundation doctors feel about performing pre-operative assessment?

S Channing, V Medland, K Manley
S Channing, 35 Greville Street, Southville, Bristol, BS3 1EF

Background
Pre-operative assessment is a clinical duty that foundation doctors are often required to perform as part of their day-to-day work. In ‘Tomorrow’s Doctors’¹ the GMC inform medical schools of the knowledge, skills and attitudes that their graduates must be able to demonstrate. Learning objectives and methods of teaching pre-operative assessment is not explicitly mentioned in this document and therefore the training received by medical undergraduates may vary markedly. The aim was to explore how current foundation doctors feel about performing pre-operative assessment; exploring the training they have received and their views on how this could be improved.

Methodology
A qualitative study was undertaken at hospitals within the Severn Postgraduate Medical Education region. Focus groups were completed with up to six foundation trainees in each. A topic guide was compiled by experts in the field and was designed to engage foundation doctors in discussion about their experiences of performing pre-operative assessment, their preparedness, the value they attach to performing it and their views of teaching in the area. Focus groups were conducted until saturation was reached.

Focus group audio recordings were transcribed and the text sent to the participants for validation of content. The data was double-coded by two researchers. Results were then compared, divergences discussed and any disagreements settled by a third researcher. Thematic analysis is currently being performed using an inductive approach².

Results
Thematic analysis is in progress and the results of this will be presented at the conference.

References
Medical students’ perceptions of and engagement with the Bio-Psycho-Social Model

T Ludhra, K Kendall, S Omer.
T Ludhra, Fourth Year Medical Student, Medical Education Development Unit, Faculty of Medicine, University of Southampton.

Background and Purpose
The bio-psycho-social (BPS) model encourages doctors to consider biological, psychological, and social contributors to health. This framework helps doctors to provide more holistic patient-centred care by taking into account mind-body interactions. Introduced by George Engel in 1977, the BPS model is now widely recognised with psychology and sociology being incorporated into medical curriculae worldwide, including at University of Southampton (UoS). Studies have been carried out in the USA, Australia, and UK showing varying medical student perceptions of, and engagement with psychology and sociology. However, no research has been undertaken in the UK to specifically address students perceptions of the BPS model. This study aims to explore how medical students perceive and apply the BPS model.

Methods
Focus groups were undertaken with first and fourth year medical students at UoS to examine the importance they place on each component of the BPS model; how clinically relevant the model is; what factors shape their engagement with the model; and what changes, if any, occur with clinical exposure. Students were also asked about any alternative models they employed. Focus groups were digitally recorded, transcribed and thematically analysed. In addition, participants completed a short activity- drawing a diagrammatic representation of the BPS model in order to further ascertain the importance placed on each component of the model, and the perceived relationship among them. The diagrams were analysed by comparing the size and relative position of each component drawn.

Findings
Preliminary findings show that although first year students understand the importance of the BPS model for their future practise, they place more importance on the biological component. Many students regard the psycho-social aspects of medicine as common sense. Therefore, with an overwhelming curriculum, they are less likely to attend lectures and revise for psycho-social subjects. Students in the fourth year are more likely to recognise both the relevance of, and the complexities involved in addressing psycho-social issues in patient care. However, the clinical role-modelling experienced shapes their perceptions of, and engagement with the BPS model. Further data will be collected and presented.

Conclusion
Although undergraduate students generally recognise the relevance of the BPS model to clinical practice, they perceive the psycho-social aspects to be less important to their current learning. Students adopt a ‘separate spheres’ BPS model rather than an integrative one. Positive role-modelling by clinicians may help students to more fully engage with the BPS model and better integrate its components.

References
Preparing students for death and dying: are we getting it right?

VLS Crawford, M Toner, B Cox, M Stevenson, D Bell
VLS Crawford, Senior Lecturer, Centre for Medical Education, The Queen’s University of Belfast, Whitla Medical Building, Belfast BT9 7BL

Background and Purpose
Communication and professionalism are key to the doctor-patient relationship and essential when caring for dying patients. How we prepare our medical students for this role impacts upon a range of stakeholders including themselves as doctors, patient relatives, colleagues and society. Literature to date suggests that current educational practices are inadequate and improvement in end-of-life care education is required.1-3

Is our role as medical teachers to only ensure student’s competencies in relation to the processes surrounding the dying patient or also to improve their ‘art’ of medicine around the conversations and discussions they will have with their patients? This study aimed to identify how best to improve delivered medical curricula, to better prepare future doctors in relation to end-of-life issues.

Methodology
A constructivist mixed methods study was undertaken, comprising questionnaires and focus groups to measure learners’ perspectives on their competence. Data were analysed using descriptive statistics and factor analysis, with competencies grouped into three domains; conversations (competent in having conversations with dying patients and relatives about a range of end-of-life issues), end-of-life (competent with end-of-life issues relating to medical, social, psychological, cultural, ethical, legal and spiritual aspects) and ethical (competent in managing a range of end-of-life processes and ethical situations). Cronbach’s α was >0.7 in all cases.

Results
90% of participants (n=274) felt that formal teaching should be compulsory; those who did not, scored lower in the conversations domain (p<0.05). Learners with prior experience of a dying patient scored significantly higher in the end-of-life domain (p<0.005) and in the ethical domain (p<0.01). Those entering medicine after a gap year, scored higher in the conversations domain (P<0.005), followed by graduates and finally school leavers. Significant differences between years of study were present. In the end-of-life domain, years 1 through 4 were equal in having low competency (average score 29) with year 5 students showing an increased score (score 43). In the ethical issues domain, again years 1-4 had low competency (average score 20), while year 5 score increased to 34.

Discussion and Conclusion
Early results emphasise learners’ perception of need for formal teaching in end-of-life and ethical domains rather than in conversations domain. This is valuable information, as to date, curricula may have concerned themselves to a greater extent with the latter. Our role as teachers may not involve the ‘art’ of medicine.

References
STICK IT! – Sharp students?

AP Cordey, AG Martin
AP Cordey, Clinical Teaching Fellow, North Somerset Academy, University of Bristol, Weston General Hospital, Weston-super-Mare, UK

Background and purpose
Needlestick injuries are the second most common cause of injury to NHS staff ¹ and are a cause of significant anxiety and stress to those affected ². Previous work has suggested that educational workshops on sharps injuries and blood-borne disease transmission be provided to medical students and that further studies are conducted on student awareness in this area ³. A potential gap was identified in our teaching programme and hence the need for a specific educational session.

Methodology
A focused teaching session was designed and delivered to the medical and dental students on placement at the local teaching academy educating them about sharps injuries. Students were asked to complete a questionnaire to assess their knowledge of the subject both before and after the session. They also completed a debrief questionnaire afterwards to generate more qualitative feedback by exploring how they felt in relation to this area which often provokes anxiety in those affected. This was also used to explore how useful they found the session.

Results
The first group of third year medical students who completed the teaching session largely reported no previous teaching in this area before which is of concern. The results of the pre and post educational session questionnaire generally revealed an initial low level of knowledge and awareness which improved on repeating the questionnaire after the educational session. The more qualitative data obtained revealed an interesting set of responses which suggested a level of anxiety associated with this subject. This may be reduced by the provision of knowledge. The results of further interventions with both medical and dental students will be presented and discussed.

Discussion and conclusions
Needlestick and sharps type injuries are clearly an important issue that may affect clinical students either on their placements or once they start work as junior doctors. The amount of teaching they receive in this area seems negligible hence the need for a formal teaching session update once they start their clinical attachments. Arming students with this knowledge may help lessen any anxiety associated with this area.

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The Swiss Cheese board game: introducing students to medical errors

YYS Ho, C Earnshaw, Z Hossenbaccus, J Hawkins, CD Rodd
YYS Ho, Clinical Teaching Fellow, Gloucestershire Royal Hospitals NHS Foundation Trust, GL1 3NN

Background and Purpose

Last year, over a million hospital incidents were reported to the National Patient Safety Agency. The GMC has stated that patient safety is of paramount importance in the undergraduate curriculum. Madigosky found a large proportion of medical students witnessed clinical errors; yet only a minority of students had reported them. At present, there is a large variation in the method of teaching patient safety amongst universities. Patient safety is under-represented in undergraduate teaching and anecdotally seen as a ‘dry’ topic. Medical board games have successfully provided an interactive learning environment for students to explore complex real-life issues and are very well received. We have created the Swiss Cheese board game which is easy to replicate and low-cost.

Use of the Swiss Cheese board game for teaching students contributory factors of clinical errors will be evaluated. We will compare the board game with a tutorial on medical errors and assess student engagement.

Methodology

Critical incidents and never events investigated at Gloucestershire Royal NHS Foundation trust were obtained and analysed to create scenarios for the board game. The causative factors would be divided into categories such as administrative, human and organisational factors. Players would examine the events contributing to the incident. A Swiss Cheese model would be replicated and tokens rewarded to sequentially block the appropriate holes in the board upon successfully analysing causation.

University of Bristol third and fifth year medical students will be randomly assigned into two groups. Group A will participate in a tutorial on medical errors and Group B will play the board game. The groups will later be crossed over and the study repeated. Pre-session forms will assess the students’ previous experience of medical errors and teaching on the topic. Post-evaluation forms, consistent of free-text questions and Likert scales, regarding topic relevance, engagement and delivery will be completed and undergo content analysis.

Results

Results of pre- and post-teaching evaluations will be presented.

Discussion

Educational board games stimulate critical-thinking skills, motivate students and promote active learning. Knowledge of critical incidents and never events causing patient harm is essential in promoting best practice, improving awareness of human factors and root cause analysis as well as ensuring our future doctors consistently deliver safe patient care. The Swiss Cheese board game is an innovative and interactive method of teaching serious medical errors that encompasses a wide range of concepts.

References

Variable knowledge, education and confidence amongst non-specialist doctors delivering palliative care (PC) services: is there a link between undergraduate teaching and clinical practice and how might deficits be addressed?

I Lawrie, SJ Walker
I Lawrie, Consultant & Honorary Clinical Senior Lecturer in Palliative Medicine, The Pennine Acute Hospitals NHS Trust & The University of Manchester M8 5RB

Background and purpose:
PC has gained prominence in an effort to deliver quality care for people with end of life needs.\(^1\) Non-specialist doctors provide the majority of such care.\(^2\) Limited research suggests that non-specialists may be underprepared and lacking in confidence for this role.\(^3\) Similarly, weaknesses may exist in PC teaching at some medical schools.\(^4\) Our aim is to explore this further by means of an examination of two parallel studies and consider the implications of our findings.

Methodology
A mixed methods survey of comparable groups of General Practitioners (GPs) and Hospital Doctors (HDs) was conducted in one large UK region examining education, knowledge and confidence in managing patients with PC needs. A second study surveyed PC course organisers at all UK medical schools, focusing on PC teaching and organisation, together with an exploration of their personal views. The results of both studies were analysed for common themes and possible implications.

Results
The majority of GPs and HDs had regular contact with patients with PC needs, and viewed PC positively. Self-assessment of competences was mixed and varied between groups: GPs were significantly more likely to positively assess their competences in managing the psychological and spiritual aspects of care than HDs.

Despite regular contact with patients with PC needs, participation in mandatory or optional postgraduate PC education was low. While attending conferences does not change practice, clinical attachments, shadowing opportunities, e-learning and using textbooks are more likely to be beneficial. Learning is fostered by study days and workshops.

A survey of PC course organisers demonstrated that while the majority of medical schools are delivering increased teaching time with greater integration into the curriculum and wider use of learning assessment, variability and areas of weakness exist e.g. limited opportunity to visit a hospice or spend meaningful time with a dying patient. Concerns expressed include limited placements and insufficient teachers, inadequate funding, and regional variations in teaching. Some course organisers were uncertain whether their courses deliver quality training, adequately prepare doctors to care for patients with PC needs, or fulfil General Medical Council requirements.

Discussion and Conclusion
PC teaching at medical school may be insufficient to equip non-specialist doctors to care for patients with PC needs. Our findings support the need for increased training for non-specialists after qualification. To be effective, such training should be learner-centred, involve clinical scenarios with an emphasis on experiential learning and a recognition of barriers to PC education.

References
“FY1 Oncall Survival Kit” Does use of mixed media in case based tutorials improve student preparedness for Foundation Year 1 tasks?

E Southgate, J Ehsanullah, S Singh
E Southgate, Clinical Education Fellow, Undergraduate Medical Office, Chelsea & Westminster Hospital, Imperial College, London SW10 9NH, UK

Background
Recent work has highlighted that preparedness for work as a Foundation Doctor varies widely amongst new medical graduates1. There is increasing emphasis on ensuring that final year undergraduate medical students have opportunities to explore more practical aspects of the Foundation doctor role prior to qualifying. When evaluating an existing Case-based learning series for final year medical students2, we found that persistent anxieties existed surrounding interpretation of media, such as observation charts, drug charts and ECGs in the acute setting. We therefore redesigned case scenarios to include complementary media to help address these perceived skill deficits. Our aim was to improve students’ confidence in interpreting clinical media in the context of assessing an acutely unwell patient as they would do as the Foundation Year 1 (FY1) doctor oncall.

Methodology
Case based tutorials incorporating mixed media were designed using feedback from an initial pilot study. We offered a series of six structured Case-based learning tutorials per cohort of students, delivered five times over five month period. Students completed pre- and post-course questionnaires which incorporated a mixture of Likert scale questions and open space questions in order to determine their confidence with interpretation of various clinical media. Students were also asked whether they felt ready to be an FY1 doctor.

Results
Twenty-six students participated in the pre and post course survey. Comparison of pre and post-course self-rated confidence scores showed that modal scores had increased for each media interpretation task following the course. Prior to the placement and tutorial series, less than 8% (7.7%) of Final year students felt “ready to be an FY1 doctor”. Following the placement and tutorial series almost 70% (69.2%) felt ready to be an FY1 doctor. Free text comments highlighted the usefulness of mixed media to the students attending.

Discussion and conclusions
FY1 doctors are expected to be able to assess the acutely unwell patient and handover relevant information to senior colleagues. These activities may cause anxiety to medical students and newly qualified doctors. We found that use of mixed media for case-based learning is welcomed by final year medical students preparing for clinical practice. Confidence with interpretation of individual media was improved by their use in case-based tutorials. This mixed-media, case-based tutorial series is associated with improved students’ perceptions of their preparedness to be an FY1 doctor.

2 David, K., Dutta, N., Najim, R., Singh, S. ‘Doctor On Call’: A novel, interactive teaching series to prepare medical students for working as foundation year 1 doctors
Experience of implementing a surgical teaching programme to final year medical students

J Hubbard, T Pepper, J Ehsanullah, E Southgate, S Singh
J Ehsanullah, Undergraduate Education Fellow, Undergraduate Department, Chelsea and Westminster Hospital, Imperial College London, 369 Fulham Rd, London SW10 9NH, UK

Background and Purpose
Theories of adult learning highlight the benefit of self-directed learning and Constructivist Theory advocates using activities which provide ‘scaffolding’—a structure which students use to inform their own learning. Despite this, students frequently request tutorials, especially in surgery which students perceive as involving rote learning. During a four week surgical placement, we created and evaluated two formats of learning; a booklet and tutorial scheme based on identified learning needs. The latter represented scaffolding for self-directed activities and the former didactic teaching.

Methodology
A focus group was performed with 8 final year students, and a questionnaire sent to surgical FY1s to identify student learning needs and main concerns regarding progress to FY1 or exams. A questionnaire was sent to previous students on three previous attachments about perceived value of either surgical tutorials or a booklet. The booklet was designed by doctors, signposting self-directed activities addressing learning needs. Eleven hour long tutorials were delivered. The booklet was given to all 6 students. Evaluation of the course was performed with pre- and post-course questionnaires, uptake records, and a focus group.

Results
The initial focus group and FY1 survey elicited areas of concern were pre-assessment, assisting in theatre, drains, anatomy and acute illness. 93% (n=14) of previous students felt that a booklet would be helpful, and 100% (n=15) felt that tutorials would be helpful in achieving learning needs. 10 of 11 tutorials took place. Student attendance was variable, ranging between 30% and 83%. Post-course questionnaires (n=5) demonstrated students felt the tutorials improved their knowledge and confidence, particularly in post-operative management and in theatre, although acute illness was still a concern. The focus group elicited that no student used the booklet, as students forgot about it and had difficulty carrying it. Students volunteered that the tutorials were extremely helpful and their attendance was limited by need to attend consultant activities for sign off.

Discussion and Conclusions
Although the booklet and tutorials were both designed at request of students and guided by previous FY1s, the booklet was not used and tutorials variably attended. Booklet uptake may be improved by making it pocket-sized. The tutorials were valued greatly and increased student confidence, which may represent a preference for pre-arranged, didactic teaching rather than self-directed activities. Of note, the tutorials require tutor motivation and time; attendance may be improved by timetabling so as not to coincide with consultant activities.

Gynaecology Teaching Associates (GTAs): Are they working?

Tyler A, Hodge F, Keveliagh E.
A Tyler, Teaching Registrar, Dept. Obstetrics & Gynaecology, Singleton Hospital, Swansea, SA2 8QA

Background
GTAs were introduced into the Swansea University Graduate Entry Medical Programme in October 2014. They teach medical students the practical and communication aspects required for speculum and internal pelvic examinations. The evidence from the literature suggests GTAs enhance student practical and communication proficiency (1). We compared the OSCE exam results for gynaecological examination for students having experienced GTAs with those who had not (students prior to October 2014).

Methodology
We reviewed the results of the gynaecology examination station in the Final OSCE exams in 2015 (post GTAs) and 2014 (pre-GTAs) and compared the scores to look for any significant improvement in outcome following the introduction of GTAs.

Results
OSCE examination results from 2015 will be available in mid-January 2016

Discussion and Conclusion
Student feedback of GTA sessions was overwhelmingly positive, with students citing improved confidence and skill. Impressions from clinicians supervising students whilst on placement suggested improvements in both students skills and confidence during gynaecological examinations. However, formal assessment has not yet shown GTAs to be of any benefit. Therefore, given the expense to the University of using the GTAs, are they worth their cost?

There are limitations within our study. There was no adjustment for other differences between the two student groups. The effects of exam stress cannot be clearly identified in either group, therefore any effect on performance cannot be quantified.

In conclusion, the medical students appear to gain significantly from improved confidence and skills, at least in the short term following GTA usage. The main aim of their use is to improve the experience of students and patients clinically, therefore for this reason alone their continued use would seem appropriate. Further evaluation of the effects on exam performance over coming years may provide a more substantial evidence base regarding exam performance.

References:
Improving surgical education in theatre: a pilot study in ENT at St Mary’s Hospital

R Vithlani, Mr Matthew Rollin
R Vithlani, Surgical Teaching Fellow, Imperial College Healthcare NHS Trust, St Mary’s Hospital, Praed St, London W2 1NY

Background and Purpose
The operating theatre is a resource intensive environment. There is increasing pressure for clinical teams to maximise theatre efficiency whilst maintaining patient safety. However this often conflicts with medical education, especially undergraduate medical education often prioritised last. Medical student teaching in theatre is often poor and not enjoyable.1,2 Studies have demonstrated that interaction and integration of the medical students in theatre does help to improve the quality of teaching whilst making it more enjoyable at the same time.1-3 At St Mary’s Hospital recent reviews of the Student Online Evaluation (SOLE) Feedback demonstrated that students did not enjoy theatre and did not consider it a useful learning experience. Hence the aim of this study is to integrate medical students into the theatre environment and encourage interaction. This will be done using procedure specific laminated information sheets (containing information about procedure specific anatomy, physiology, pathology, guidelines and management) as well as worksheets which the students will need to fill out to learn about the instruments used in various procedures, through interaction with the multidisciplinary team.

Methodology
All undergraduate medical students undergoing ENT rotation at St Mary’s Hospital between January 2016 and March 2016 will be given end of placement questionnaires assessing the usefulness of the information and worksheets as well as the quality of the theatre learning environment. Students’ SOLE feedback prior to the introduction of the worksheets as well as post intervention will also be compared to demonstrate any clear differences in students’ perception of the theatre learning environment. Analysis will be performed qualitatively demonstrating patterns and themes pre and post intervention.

Results
Data is currently being gathered from the students’ experience of using the theatre information and worksheets. We will then compare the students’ SOLE feedback prior to the introduction of the worksheets as well as post intervention to see if there are any themes or changes in perceived quality of surgical education in theatre

Discussion and Conclusions
The operating theatre is a resource intensive environment. Education, particularly undergraduate education is often prioritised last in this clinical environment. We propose a simple method to encourage medical student integration and interaction in the theatre environment in a safe and effective manner. This study will hopefully demonstrate that information and worksheets can be used to improve the quality and efficiency of undergraduate medical education in theatre.

References
Medical student identification: continuing to remove anonymity

Botting N, Wallis S, Burton H, Hall S, Fawcett J, Sansom J
N Botting, South Bristol Academy, University of Bristol, Bristol

Background
The importance of identification of hospital staff was highlighted by the Francis report. In previous work, we have shown that medical students can be mis-identified in clinical areas and in particular, are mistaken for junior doctors and pharmacists which could lead to potential clinical incidents. The introduction of medical student lanyards in our Trust improved the percentage of students feeling identifiable to staff on the wards from 20% at baseline to 89% at six weeks.

Aims
1. To assess whether the medical student lanyard has continued to make medical students more identifiable to healthcare workers
2. To assess whether the medical student lanyard has made medical students more identifiable to patients
3. To assess whether the previously assessed improved identifiability amongst medical students at six weeks is sustained at six months.
4.

Methods
In the second part of this prospective observational study, three questionnaires have been designed; one each for medical students, staff and patients to address aims 1 – 3. All third and final year medical students on placement in medicine and surgery at UH Bristol NHS Foundation Trust (n=68) will be targeted to address aim 3. Additionally, Trust approved questionnaires have been designed for staff and patients, which will be completed at a single time point. Any staff working in clinical areas that have been employed by the Trust for twelve months or longer will be included. Any patient who has had an interaction with a medical student during their inpatient stay who is not acutely unwell or confused will be included. Results will be analysed to look for awareness of lanyards amongst staff and patients and whether they are felt to improve identifiability of medical students.

Conclusions
The medical student lanyard is a novel approach to improving identification of medical students in the Severn Deanery. This study aims to demonstrate a sustained improvement in medical student opinion and also to evaluate the views of patients and healthcare professionals.

References
Opportunities to clerk inpatients in a large teaching hospital: A growing problem for medical students?

J Hollamby, J Morgan,
J Hollamby, Clinical Teaching Fellow, North Bristol Academy, University of Bristol Medical School,
Southmead Hospital, Bristol, BS10 5NB.

Background
Education of the future generation of doctors can be achieved in a variety of ways* however few would dispute that patients are an important resource for learning. A clerking portfolio is one method of bringing students to the wards however appropriate inpatient availability is required for this to be effective.

Aim
Our aim was to examine availability of the inpatient resource in a large teaching hospital and gain feedback from doctors about their experience of clerking portfolios.

Method
Data was collected in the form of a paper questionnaire distributed at teaching sessions to core medical, foundation year one and foundation year two trainees. Quantitative data was collected regarding how many patients on their inpatient lists were considered appropriate for a) a full clerking comprising history plus cardiovascular, respiratory, gastrointestinal and neurological or b) a short learning encounter such as a single system examination. Trainees were asked whether they completed a clerking portfolio during medical school and if yes were given the option of providing qualitative written feedback regarding whether this altered their practice as a doctor.

Results
105 questionnaires were distributed, 67 collected, 4 incomplete. Uptake was poor in foundation year two doctors partly as some had no inpatients. Analysis of the completed responses showed that average availability of inpatients was 30% for a full clerking and 50% for a short encounter. The latter figure includes those who would be available for a full clerking. 16 doctors reported completing a clerking portfolio whilst at university. 50% of these respondents answered that this changed their practice as a doctor, 13% reported that it did not. The 15 free text comments provided were analysed by theme. Five related to a positive effect on clerking skills for example “improved my history taking”. Six comments highlighted time or workload issues. Three comments were made concerning a potentially negative effect on patients: “struggled to complete all examinations”.

Discussion and Conclusion
The results suggest that limiting portfolio cases to a full clerking limits patient availability to approximately 30%. Less specific portfolio requirements could potentially increase the patient resource by 66%. The results suggest that the current portfolio requirements may not be the most effective method for obtaining maximum benefit from the in-patient resource. The qualitative feedback suggests that clerking portfolios can be a time inefficient process. More exploration of student behaviour would complement these results.
Orientating Medical Students at the start of the Clinical Phase to Wards: A Novel Focus for a Simulated Ward Round.

J Offer, S Tilson, J Pattinson
S Tilson, Undergraduate Department, Queen’s Medical Centre, Derby Rd, Nottingham NG7 2UH. stephen.tilson@nuh.nhs.uk

Background
Simulated ward rounds are an innovative new trend in undergraduate medical education. They have been described as particularly well suited to teaching non-technical skills such as communicating with colleagues, prioritisation and dealing with stressful situations. Simulated Ward Rounds have been described that are designed for nursing students, pharmacy students, physiotherapy students and for inter-professional education.

Those designed for medical students tend to be aimed at those who are relatively senior and about to transition into clinical practice. We wanted to see if this model could be adapted for undergraduate medical students who were at the beginning of the clinical phase of their training.

Methods
We designed a simulated ward round involving three patient-based scenarios with tasks to highlight how a third year student could appropriately contribute to a ward round and make the most of the ward round as an educational opportunity. Secondary outcomes were to orientate students to hospital wards and their medical staff and to introduce the students to the concept of simulation-based training early on in their clinical experience.

The ward round was analysed using questionnaires 6 weeks later when students were asked to relate the simulation to their subsequent experience on wards and ward rounds.

Results
Full results will be presented in our poster. 45 students have taken part in this simulated ward round, with a further 48 scheduled to take part before we present our poster. From our preliminary results – 91.4% of students said that they found it helpful, and the same proportion would recommend the simulated ward round to colleagues. 97.1% agreed that the simulation helped orientate them to what a medical ward round consists of, and 60% said that it helped them to learn more from real medical ward rounds.

Discussion
Simulated ward rounds are becoming increasingly established as a teaching tool, particularly for often neglected human factors teaching and non-technical skills. We are not aware of anyone else using them with students so early in their clinical experience, nor with a focus on induction and orientation. The only other account of simulation use in induction that we have found involved videos rather than simulated patients.

Students found the experience helpful, particularly to orientate themselves to the workings and personnel of a ward round. We will continue to develop this simulation, based on feedback, and keep it as part of our third year induction course.

References:
Patient consent to medical students in primary care: a pilot study

M Webb, H Clifford, R McKinley
M Webb, Keele Medical School, Keele, Staffordshire, ST5 5BG

Introduction
Informed consent is required for active participation of patients in medical education 1. Further research is needed looking at patients’ attitudes to and acceptance of medical student teaching 2. We require practices to advertise that they teach undergraduate students, to inform patients if they will see a student, to obtain appropriate patient consent and, furthermore, they are encouraged to gain consent at each stage of the patient journey in a variety of ways.

Method
During the final year at Keele University Medical School, students undertake a patient satisfaction survey. A pilot questionnaire was attached to the reverse of this patient satisfaction survey. The questionnaire explored patient awareness of the surgery being a teaching practice, at what stage of the patient journey consent was obtained, whether they were offered an alternative and how comfortable they were with medical students being involved in their care.

Results
So far, 45 forms have been completed by patients and returned. Of these, 69% of patients stated that they were aware that the practice took medical students. 93% of patients report that verbal consent was obtained at least once during their encounter and 91% of patients stated that they were comfortable or very comfortable with a medical student leading their consultation. However, 22% of those surveyed stated that they were either not given the option of not seeing the student or there was no other alternative appointment available.

Discussion
Only four reports out of a total of 49 were left blank, which may indicate that patients are happy to provide feedback on this topic. The results indicate that in the majority of cases patient consent is obtained at least once during their attendance. Patients expressed a high level of satisfaction with medical students’ involvement in their care, which aligns with previous research in this area 3. There are a small but significant number of patients who report that no consent was obtained at any stage of their contact. Further work is required to evaluate the role of the data as a marker of teaching quality and to look at ways of improving the process of informed consent.

References
Pre-Prescribing: What do they think? An exploration into the attitudes of medical students and junior doctors of pre-prescribing within NHS Lothian.

Bradford V, Clinical Development Fellow NHS Lothian

Introduction
The General Medical Council states that medical graduates must be able to prescribe ‘safely, effectively and economically’ 1 Despite this, the EQUIP and PROTECT studies reported prescription error rates of 8.4% and 7.4% in foundation year one doctors (FY1) 2,3. In response, the University of Edinburgh developed pre-prescribing, a controlled process for final year medical students to gain experience of real prescription writing4. The aim of this project is to explore attitudes towards Pre-prescribing. To assess whether those involved felt it was beneficial to their prescribing education; ultimately improving patient safety.

Method
An anonymous online questionnaire was sent to all medical students on clinical placements that support pre-prescribing. A separate questionnaire was sent to all FY1s, which they were encouraged to complete if they had been involved in pre-prescribing as a ‘teacher’. The questionnaires contained a mixture of Likert scale and free text questions, to assess their involvement in and evaluate their attitudes towards pre-prescribing. Following this, small numbers of those who had completed the questionnaires, were invited to take part in a semi-structured interview to explore their responses in more detail. Framework analysis was undertaken to identify themes emerging from the data.

Results
44 medical students and 43 FY1 doctors responded to the questionnaires. Preparation for practice was the major motivating factor for medical students (90.7%). 95.3% of students appeared found it useful, but they felt that more support from doctors is required. 20/43 junior doctors who responded, graduated from Edinburgh University, and of these 80% had been involved in pre-prescribing as a student. Only 41.5% of foundation year doctors felt confident prescribing when they started working and 86% felt that students needed more education, particularly in the practical aspects of prescribing. Interviews focused more deeply on FY1 attitudes, in particular how it affected the day-to-day work on the ward and their practice. Emerging themes from these interviews will be presented.

Conclusion
The data collected showed a positive attitude towards pre-prescribing. Both FY1 and Medical students thought it was a good initiative to improve preparation for foundation year. On the whole they felt that it was something they wished to see continue as it was a benefit to their education.

Qualitative study of the impact of medical undergraduate authentic electronic portfolio use on preparedness for practice in Foundation Year

Helen Nolan, Clinical teaching fellow
UCL Medical School, Academic Centre for Medical Education (ACME), Room GF/664, Royal Free Hospital, Hampstead, London NW3 2PF Email: h.nolan@ucl.ac.uk

Background
Portfolios are widely used in post-graduate medical education and now are increasingly adopted in undergraduate settings also.(1). Their role in enhancing preparedness for practice (PfP) in Foundation Years has been considered quantitatively (2).

In conjunction with three other medical schools, (1) UCL Medical School (UCLMS) introduced a compulsory ePortfolio in 2011. Each medical school used the ePortfolio differently. At UCLMS, the portfolio was designed to replicate the NHS ePortfolio used by foundation year (FY) doctors to simulate postgraduate conditions.

This portfolio is now used, in various ways, by 11 medical schools. The first cohort of UCL students to use this ePortfolio from the undergraduate to postgraduate setting are currently FY doctors. This study aims to qualitatively explore whether the introduction of a NHS-based ePortfolio at medical school has had any impact on PfP amongst FY doctors.

Methodology
Using purposive sampling (3), three comparator groups will be contacted - 1) graduates who used the NHS-based ePortfolio, 2) graduates who used a different Portfolio or ePortfolio and 3) graduates who didn’t use any ePortfolio or Portfolio.

Using research questions based on a previous General Medical Council report of PFP (4) differences in levels of PfP between these groups will be established. Acknowledgement is given to the heterogeneous nature of this concept including the variety of domains it encompasses e.g. theoretical and practical preparedness and personal readiness. In keeping with a qualitative framework, themes will emerge inductively (3). Data will be gathered in qualitative face-to-face and telephone interviews and analysed for themes in relation to PfP.

Discussion
The impact of the introduction of an NHS-based ePortfolio at undergraduate level will be discussed and emergent themes will be reported.

References
4 Monrouxe L, Bullock A, Cole J. How Prepared are UK Medical Graduates for Practice? Final report from a programme of research commissioned by the General Medical Council. 2015
Student Run Simulation

J Barr, C Banks, J Moffatt, T Goddard, K Else
J Barr, Swindon Academy, Great Western Hospital, Marlborough Road, Swindon, SN3 6BB

Background
The growing popularity of peer teaching in the undergraduate medical curriculum is based on the premise that by preparing and delivering teaching activities, students have improved retention and understanding of the topic. It has also been demonstrated that it provides benefit for the learners, as they receive teaching which is at the right level for them\(^1\).

Delivering this peer teaching during the clinical years has been shown to improve learning within both the psychomotor and cognitive domains\(^2\), as the teaching task itself serves as a powerful motivation for deeper learning.

University of Bristol students at Swindon Academy routinely learn through high fidelity simulation. This is acknowledged as extremely valuable by the students as it allows development of generic skills including patient assessment and teamwork, in a safe learning environment\(^3\).

We therefore determined to combine these elements and design a project where peer teaching is used in simulation to improve the learning opportunities for all students involved. As stated in Tomorrows Doctors\(^4\) medical graduates must “function effectively as a mentor and teacher” and we hope by implementing this near-peer teaching element within the undergraduate curriculum to help prepare medical students for their future role as educators.

Method and Results
Seven third year medical students on their Emergency Medicine placement will experience a standard tutor led simulation. Following this they will have the opportunity to prepare simulation scenarios themselves for a given acute medical condition. The scenarios will allow a pair of learner students to perform an ABCDE assessment during the simulation. Students will be given a standard proforma to help them to plan the session and will have personal study time to prepare the simulation. Prior to the delivery of the session each student will have a session with a tutor to review their plan. Following review the students will deliver the simulation for their peers assisted by course tutors.

Evaluation of the project will be by questionnaire. Quantitative data will be obtained by Likert-type response options which will be complemented by free text qualitative data collection. Focus groups will also be run with students and tutors independently to explore perceptions about the session, its benefits, pitfalls and usefulness for students.

Conclusion
It is expected that the experience of designing and performing simulation scenarios will provide students with both the benefits of peer teaching and those of simulation sessions and help prepare medical students for their future role as educators.

References
The clerking portfolio: an exploration of student, doctor and patient perspectives

J Hollamby, J Morgan, J Joy Hollamby, Clinical Teaching Fellow, North Bristol Academy, University of Bristol Medical School, Southmead Hospital, Bristol, BS10 5NB.

Background
The clerking portfolio is a heuristic tool used in some medical schools to direct learning however there is limited data regarding its use. The University of Bristol Medical School mandates the completion of an assessed clerking portfolio during the junior and senior medicine and surgery blocks (JMS and SMS). The practicality of using inpatients as learning resources needs to be understood with any affect this may have on patient experience.

Aim
Our aim is to examine the practicality of implementing a clerking portfolio in a large teaching hospital and analyse the potential impact on students, patients and doctors.

Method
A questionnaire has been collected from undergraduates in two Bristol Medical School Academies regarding time spent on the portfolio, difficulty finding a patient and how often patients have been seen by students beforehand. Focus groups for undergraduates are pending. Doctors in North Bristol Trust completed a questionnaire regarding how many patients were suitable to see students. A questionnaire for inpatients to explore reasons for seeing medical students and how much time they would be prepared to spend with students is pending.

Results
79 undergraduate questionnaires were returned, 76 complete. The time spent with the patient varied between 22 and 120 minutes, averaging 71 for JMS students, 49 for SMS. Average difficulty rating for finding a patient was 5.2/10.

66% of the students reported that patients they approach to clerk have been seen by a student ‘once or twice’, 34% reported patients have been seen “multiple times (≥3)”.

67 questionnaires from doctors were collected, 4 incomplete. Analysis showed that 20% more inpatients were considered available for clerking if the encounter was single system or history based. At a maximum only 50% of the inpatient cohort was considered suitable to see medical students. 50% of those who completed a clerking portfolio during university reported that it altered their practice as a doctor.

Discussion and Conclusion
Since only a proportion of the inpatient cohort is considered suitable for clerking this potentially leaves the inpatient pool small for a large number of undergraduates. This could explain why medical students report difficulty finding patients to clerk but also why some patients are being seen multiple times. Survey results from patients should help understand their experience of the interaction. The importance of understanding the impact of clerking on our patients is essential if we wish to keep the balance between teaching and patient care sustainable.
The Obstetrics & Gynaecology Teaching Registrar: The Changing face of Obstetrics & Gynaecology Medical Education.

Tyler A, Hodge F, Kevelighan E, Gasson J.
A Tyler, Teaching Registrar, Dept. Obstetrics & Gynaecology, Singleton Hospital, Swansea, SA2 8QA

Background
‘Positive student exposure to obstetrics affects future career decisions for medical students, and thus continued effort to ensure effective undergraduate training is essential to the specialty.’(1) In 2013 with increasing student numbers and expanding clinical rotations concern was raised about being able to maintain effective clinical care, with continued high quality/excellence in medical student teaching. The potential burnout of the few staff involved, drop in teaching quality, effectiveness and overall student and patient experience was a very real possibility.

Method
Our 2 consultant leads responsible for medical student training, working with a blank canvas, created a solution - the teaching registrar. This was not based on any existing formulas for clinical teaching fellows, but rather on the local needs of the students, the department and the potential achievable opportunities for a new teaching registrar. Funding for the post was approved through SIFT.

Results
Although still in its infancy, this post has had overwhelmingly positive feedback from the students experiencing it. It has also been a success for the trainees undertaking the role, as well as the clinicians of the department and the faculty of the University.

Discussion and Conclusions
There are many different takes on the clinical teaching fellow or teaching registrar that are currently employed across the UK. We, however, consider that there are some unique features of this role. Unlike many others, this post funded through SIFT ensures the Registrar is 100% student focussed with no service commitment. There is no out of hours cover, freeing the post holder to be present throughout the students’ time on placement. Despite this and the 4 weeks of formal lectures at the University, there is significant clinical exposure with weekly gynaecology and antenatal outpatient clinics, gynaecology operating time, and (daytime) labour ward cover. Furthermore, the post holder will become formally OSCE examiner trained and hold an honorary clinical lectureship with Swansea University. They also have the opportunity to undertake the PG Cert in Medical Education and contribute to educational research.

In conclusion, the Teaching Registrar post is considered a huge success, both in terms of the clinical needs of the department, the medical students, the university faculty, and the teaching registrars themselves. It is to its credit that other departments within the health board are creating similar posts in an attempt to mirror its success. We would advocate the use of this type of teaching registrar post across the UK.

References:
Paper withdrawn
Technology Enhanced Learning
‘BCDE SOS’ – A Webinar Based Teaching Programme For Final Year Medical Students

J M Kennedy

J M Kennedy, FY2 Doctor, Cheltenham General Hospital, Gloucestershire Hospitals NHS Foundation Trust, Sandford Road, Cheltenham, GL53 7AN

Background and Purpose
The web seminar, or ‘webinar’, has been widely described as a useful tool in medical education for medical students, junior doctors and allied health professionals [1-4]. It allows real-time interaction with the teacher while overcoming geographical boundaries. ‘BCDE SOS’ was a four session teaching programme covering essential material required for the Bristol Clinical Data Exam (BCDE) sat by final year medical students at the University of Bristol, and took the format of a series of interactive webinars delivered via the WebEx platform [5].

Methodology
The sessions ranged in duration from 60 to 90 minutes. Slides with a multiple choice question or images and descriptions pertaining to a particular condition were shown, and students were encouraged to type their answers into the ‘chat’ box. Answers were then reviewed and discussed. Attendance ranged from 17 to 33 students logged in per session, although true attendance was invariably higher as frequently multiple students opted to attend via one login. Students from Academies across the region attended.

Results
Feedback was collated after each webinar. Overall the programme received positive quantitative feedback, with students rating ‘overall content’, ‘delivery’ and ‘relevance to BCDE exam’ 4.5 out of 5, and the ‘format’ 4.6 out of 5. Qualitative feedback was also encouraging. Many students commented positively on the interactive and competitive aspect enabled by the format. Duration of the sessions seemed appropriate, and students enjoyed the opportunity to answer questions in real time. Minimal technical difficulties were encountered. A dynamic and iterative approach was used to act on any points for improvement from session to session. Follow-up feedback after the students had sat their exam confirmed they had found the programme useful and relevant.

Discussion and Conclusions
Though relatively novel, webinars could prove an invaluable teaching method through the ability to distribute teaching content in an interactive manner without geographic constraints. This programme demonstrated webinars to be a feasible, accessible and effective format of teaching to prepare medical students for their final exams.

References
5. Cisco WebEx Web Conferencing. www.webex.co.uk
‘Consulting the CaseBank’: a retrospective study on the impact of role-play cases on undergraduate medical student revision

L Jones, J Guckian, T Johnson, D Eastwood
L Jones, South Tyneside Foundation Trust

Aim
To evaluate the use and benefit of ‘ready-made’ role-play cases in final year medical student revision.

Introduction
Simulation has been shown to lead to improvements in medical knowledge and comfort in procedures, in addition to proving a reliable tool for teaching topics such as communication skills. [1] Indeed, ‘Kinesthetic’[2] learners learn best with practice or simulated scenarios[3], such as role play.

At the time of writing, there did not exist a free, online ‘bank’ of pre-developed cases in order to facilitate role-play for medical students. There is also a lack of focused review in the literature of the impact of role-play in clinical histories in the context of undergraduate medical education.

Methods
Sixty-four ‘ready-made’ cases were written, featuring student instructions, patient instructions and examiner instructions. These centred on core clinical presentations in medicine, surgery and medical specialties. Example discussion questions were provided at the end of each case to test knowledge, whilst the overall format mimicked the Mosler [long case] structure utilised at Newcastle University Medical School. The cases were hosted on Medisense.org.uk, a medical education website designed for visual, auditory and kinaesthetic learning. The series was released on 17th May 2015.

The impact of the cases is to be assessed in two ways. Primarily, numbers of case downloads or ‘hits’ are to be counted, with individual case ‘hits’ to be compared and contrasted. Secondly, a focus group containing current Foundation Year One doctors is to be consulted. These doctors are based in the North East of England and attended Newcastle University Medical School. The focus group will be asked about their access to the cases, their ease of use, limitations of such a learning resource and the perceived impact this case series had on their learning needs prior to finals examinations.

The above data collection was focused on the period 17/05/15- 31/12/15.

Results
Evaluation of results is ongoing. Early collection of data indicates 14,980 case ‘hits’ in the above time period. The most popular case was ‘Perry Arrest’, a Multiple Myeloma presentation.

Conclusion
Current indications from discussions in the focus groups and data collection suggest that this is a unique, popular resource, which students have found easy to access. This project will continue to evaluate the impact of such a resource on learning needs of final year medical students prior to clinical examinations.

References
A blend of two worlds: Geeks and Doctors creating a bespoke Clinical Teaching Fellow e-portfolio

ZA Dawood, M Sherwood, Z Hossenbaccus, J Hawkins, C Earnshaw, YYS Ho, CD Rodd
ZA Dawood, University of Gloucestershire, School of Computing and Technology, The Park, Cheltenham, GL50 2RH

Background and Purpose
Portfolios are widely used in medical education to assist with Continuous Professional Development (CPD). While there are a range of e-portfolios for healthcare trainees, there is nothing that fits the needs and requirements for a Clinical Teaching Fellow (CTF). CTFs agree that a platform to record evidence of achievements, personal developments, reflections and research during their time in the role is needed for CPD. In response to this, the School of Computing and Technology’s Digital Media and Web Technologies Department at the University of Gloucestershire have developed a bespoke CTF e-portfolio, in collaboration with Gloucestershire Academy (University of Bristol), with the purpose of creating an intuitive and user-friendly experience for CTFs.

Methodology
The process of developing a web application within a domain knowledge outside that of a Web Designer/Developer (WDD), required careful analysis and planning. Communication between CTFs and WDDs enabled the WDDs to undergo an agile waterfall development methodology for the CTF e-portfolio, with testing and maintenance as an on-going process. The methodology comprised the following phases:

Phase 1 – Requirements: we created wireframes using Adobe Photoshop offering a high-level view for navigating and detailing content of the CTF e-portfolio.
Phase 2 – Design: firstly, we mapped out the database’s structure using entity relationship diagrams providing a clear understanding for how data flows throughout the system; more specifically, the interaction between supervisors and CTFs. Secondly, we designed a user interface optimised for a usable and accessible experience across multiple platforms, including desktops, laptops, tablets and smart phones.
Phase 3 – Implementation: we implemented phase 2 using modern web technologies to drive the e-portfolio’s core functionality, interactivity and navigation. We used HTML5 for semantic Document Object Modelling and its associated Application Programming Interface (API) components, CSS3 for flexible box layouts, JavaScript’s jQuery API for user interaction and PHP Data Objects with MySQL databases to securely process data transactions.
Phase 4 – Testing: we verified the integrity of phase 3 with CTFs.
Phase 5 – Maintenance: we took on board the feedback from phase 4 and reapplied phases 1 to 5.

Results
A bespoke CTF e-portfolio has been developed with the following functional features: create, edit and view a CTF’s personal and supervisor details; create, edit and view a) assessments, b) teaching, c) clinical and d) research sessions; reflect on teaching, clinical and research sessions; manage and upload supporting evidence and library files. A live demonstration of the e-portfolio will be presented.

Discussion and Conclusions
In accordance with the agile manifesto, developing a bespoke CTF e-portfolio alongside doctors enabled the web experts to implement a meaningful user experience. This was achieved by ensuring that a consistent, well-structured, well-designed and well-optimised web application framework was adhered to during all phases of development.

References
A novel cardiology advanced simulation training (cast) course

MS Nazir, YR Tow, S Daly, Z Astroulakis
M S Nazir. Department of Cardiology, Clinical Academic Group, St George’s University Hospital, Blackshaw Road, London, SW17 0QT sohaib.nazir@gmail.com

Background and Purpose
Simulation based training (SBT) is advocated by the British Cardiovascular Society (BCS) to develop and enhance core skills including coronary angiography\(^1\). SBT serves as a platform for trainees to develop core knowledge and skills that can translate to improved performance, reduced complications and improved patient safety.

Design
We designed a novel one day course for junior cardiology registrars to enhance core knowledge and skills through a mixture of simulation based training, lecture based teaching and practical workshops. Using the principles of constructive alignment, the content of the course was matched to learning objectives of the cardiology curriculum\(^2\). The training day was held at St. Georges Advanced Patient Simulator centre with state of the art facilities and high fidelity manikins. An interprofessional approach was undertaken with support from the teaching faculty from cardiologists, radiographers and nurses. Furthermore, we obtained industry funding from including Mentis, Cordis and Boston Scientific.

Methodology
Eight cardiology specialist trainees participated in this course in September 2015. During the simulation sessions, the learners were provided with opportunities to undertake various simulation scenarios including coronary angiography, pacing and pericardiocentesis. Learners were provided with immediate feedback through a consultant cardiologist using different feedback models\(^3-4\). Practical skills workshops included vascular access, catheter manipulation, patient preparation and equipment setup. Lectures included indication of angiography, patient setup, radiation safety, renal considerations and complications. Participants were divided into three groups with an ‘offset’ programme. In this offset programme, smaller group of learners rotate in groups of two or three around different workshops in order to maximise learning opportunities, hands on experience and ultimately obtain maximal simulation based training. Course evaluation: Participants completed pre and post course questionnaire to rate knowledge and skills. Qualitative analysis were undertaken to evaluate the course through open ended questions and focus group discussions.

Results
Pre and post course analysis ratings of knowledge and skills (5 points scale) demonstrated improvement in all domains of knowledge and skills (see Fig.1). All participants perceived the course met their learning objectives.

Pre course
Conclusions
This is a highly innovative course using simulation based training and an offset programme using a multidisciplinary approach. This pilot course has demonstrated improved perception of knowledge and skills among trainees who undertook this course. Further courses need to be undertaken for further robust course validation. Finally, this course has been endorsed nationally by the British Cardiovascular Society.

References
A simulated eye clinic and a virtual ophthalmic case: alternative worlds.

M Williams, C Ross, S Derbyshire, J Murray
Corr auth Centre for Medical Education, Mulhouse Building, Royal Victoria Hospital, Belfast, UK, BT12 6BJ

Introduction
Ophthalmology is part of the formal curriculum in medicine in Queen’s University of Belfast, occurring in the third year of a five year course: it was hypothesized that ophthalmic knowledge and skills decay following this. A simulated eye clinic (SEC) was designed and run for all final year students to address this, held as part of the curriculum’s ‘Patient Safety Week’. Since originally presented (INMED 2015), it has evolved.
The aims of this are a) to disseminate a simulation exercise in a novel setting with some novel aspects, b) to present self-reported confidence (SRC) of pertinent skills, c) to present the nature of and feedback on changes made and on the virtual eye case.

Methods
The SEC consisted of four stations. Each station had a standardized patient, and in addition at one station students had to act as the ‘oncall’ team. Students worked in teams. Specific tasks were allocated to each team member at each station, including the role of ‘pseudoexaminer’. Following a power calculation, SRC was recorded on a Likert scale for two groups of students: third years before and after their ophthalmology attachment, and final years before and after the SEC. Analysis was by non-parametric methods. In the following year (2015-16) the role of the ‘pseudoexaminer’ was adapted, and one station was replaced by a PC-based virtual eye case.

Results
Data was collected from third (n=95 & 45) and final year students (n=95 & 96). A statistically significant increase in SRC was associated with the third year ophthalmology attachment and the simulated eye clinic, having significantly declined in between (p<0.001 for all comparisons). For the next year group, the structure was changed to empower the ‘pseudoexaminer’. The virtual eye case was developed with ‘LearnIt3d’, and consisted of a virtual world rendered in 3d, in which an avatar controlled by the student had to work through a clinical scenario with a virtual patient. Students deemed this to be useful but better suited to a different setting.

Discussion and conclusion
Simulation is feasible in an ophthalmic setting. Important emergencies can have ophthalmic presentations, and students valued the opportunity to revive ophthalmic skills in the interactive settings of simulated and virtual worlds.
A Virtual Reality Experience for Ophthalmology Fundus Teaching

A Sundaram, N Murch, R Collins, S Vitello and S Jain
A Sundaram, Royal Free Hospital, Pond Street, London, NW3 2QG

Background
With continuing advancements in technology, devices have emerged allowing us to view the fundus easily, producing clear images, in a matter of seconds and requiring little training\(^1\). It is therefore even more important that medical students and junior doctors are able to confidently interpret fundal images, particularly in general practice and acute medicine.

Feedback from a one week ophthalmology placement at a London medical school showed 57% student satisfaction (4 or 5 in Likert scale) with their ophthalmology placement, 73% of whom felt there was inadequate opportunity to see patients.

As not only clinicians but educators, doctors have a role to engage students in teaching and provide the necessary tools. Virtual reality is increasingly known to have a role in medical education\(^2\) and we feel in particular could be effectively used in ophthalmology teaching.

Aims and objectives
1. To create an innovative and engaging teaching experience for students and junior doctors to view and interpret common fundal pathologies.
2. To assess the confidence levels of students before and after the session in recognising features and diagnosing common pathologies.
3. To assess student satisfaction levels of their ophthalmology placement after implementation of a new teaching experience.

Methods
A software is currently being created to produce a 360° virtual reality display, via a headset, of ultra-widefield retinal imaging, including that of six different common pathologies of the retina. Using Oculus Rift (Samsung) technology this will give the perception of being “within the eye” itself.

Questionnaires will be distributed to 15 students before and after the session, to find out confidence levels of interpreting retinal imaging and diagnosing common ophthalmic pathologies, using Likert scale. The student satisfaction levels will be compared after their placement with the initial findings.

Results and Conclusion
Results expected to be collected by April 2016 and to show improved confidence after teaching sessions and greater ophthalmology placement satisfaction.

References
Analysing tracking data to understand doctors’ use of a smartphone app

A Brookwick, K Webb, AD Bullock
A Brookwick, Cardiff University, 12 Museum Place, Cardiff CF10 3BG

Background and Purpose
The Wales Deanery provides junior doctors with the “iDoc” app. This gives instant access to key medical textbooks via personal smartphones. This presentation adds to the body of work which has recorded the benefits and challenges of app usage in the workplace (1, 2, 3) by reporting using app data analytics to quantify patterns of use. We report who uses the app, when and for what purpose.

Methodology
All foundation doctors (F1s and F2s) across Wales were invited to participate. Ethical approval for the study was obtained from Cardiff University and all participants consented prior to engagement. App user activity data (date and time of access, book used, page number and any search terms) were collected over a 12-month period from August 2014 from 186 F1s and 54 F2s. We used descriptive, correlational and multivariate statistics in SPSS to explore usage and participant characteristics.

Results
Analysis of over 179,500 sessions revealed differences in patterns of use. App use peaked on Wednesdays for both F1s and F2s and notably reduced over the weekend. Patterns of use over the year peaked in December for F2s when the ‘Oxford Handbook of Critical Care’ was used extensively. Lower usage was recorded for F2s in June and July. For F1s, usage peaked in September, which coincides with the second month of their training. Similarly to F2s, low usage was observed in July. Some similarities and differences in books most commonly used were observed between F1s/F2s. Average number of app accesses per day was 1.7 per F1 and 2.4 per F2. Overall females used the app marginally more than males.

Discussion and Conclusion
Tracking data is readily available but rarely analysed. This study addresses a gap in the research into the use of mobile technology by doctors in the workplace by analysing the rich data from analytics. Our analysis shows how app uses varies by time, day, month, gender and foundation year. In the next phase of our study we will link this to qualitative data to enrich our understanding of the patterns observed.

References
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Background and Purpose

Foundation doctors are often expected to assess and interpret plain x-ray studies of the chest/abdomen before a definitive report is issued by senior staff. The Royal College of Radiologists have published guidelines (RCR curriculum) on the scope of plain film findings with which medical students should be familiar. Studies have shown that the x-ray interpretation without feedback does not significantly improve diagnostic ability. Queen’s University, Belfast Trust Radiology and Experior Medical developed an online system to assess individual student ability to interpret X-ray findings. Over a series of assessments each student’s profile was built, identifying individual strengths and weaknesses. Bespoke individual formative assessments were created, re-evaluating previously identified weak areas and quantifying interpretative skill improvement. We aimed to determine ease of adoption of this online system by senior medical students, investigating if increasing exposure to interpretation combined with cyclical formative feedback enhances performance.

Methodology

The online resource, comprising 10 weekly 30 minute tests, was offered to all 270 final year medical students. These included both normal and abnormal x-rays findings within the scope of the RCR curriculum, with serial tests made incrementally more challenging (2 independent, blinded RCR examiners concluded that the tests became serially more difficult in chronological order of delivery). After each assessment, students were given formative feedback, including results, annotated answers, with direct links to further online educational resources, peer group comparison and a breakdown of their own areas of strength and weakness. Focus groups of 4-5 students addressed student perspectives of the system, including ease of use, image resolution, system performance throughout operating platforms, value of formative feedback, breakdown of performance and the value of bespoke personalized assessments. Research Ethics Approval was granted for the study. Data analysis was via two-sided one-sample t-test.

Results

81% (219/270) of the student cohort engaged with the study. Student baseline average was 49%, increasing to 77% by the exit test. The group sustained a statistically significant improvement between first and last tests of the series (57% relative performance in diagnostic accuracy) despite increasing test difficulty. Student feedback via focus groups was universally positive throughout examined domains.

Discussion and Conclusions

The online resource proved valuable, with high levels of student engagement, improving performance despite increasingly difficulty testing and consistently positive learner experience with the system.

References

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Blending the old with the new: “see one, do one” A randomised controlled trial into the use of a first person perspective video prior to a simulation scenario.

J Fukuta, J Hollamby, M Hollifield, R Rooney, F Tasker, I Taylor, J Morgan
J Fukuta, Clinical Teaching Fellow, North Bristol Academy, North Bristol NHS Trust, Learning & Research, Southmead Hospital, Bristol, BS10 5NB

Background and Purpose
Simulation training is seen as a new but integral part of the medical curriculum. By preparing students for situations which previously would only have been encountered for the first time when starting work, it has been shown to be more effective than classical teaching in certain situations. However, simulation training is time intensive and faculty heavy and ways of making more efficient use of it are being sought. One possible solution could be to employ the old adage of “see one, do one”. Studies have shown the benefit of videos prior to simulation of practical procedures, however no work has been done into the possible benefits prior to managing a clinical scenario. To maximise the authenticity of the experience we wish to film the scenario using a first person perspective, which has not been done before for a clinical scenario. By employing this type of video prior to simulations being performed, the aim of this study would be to see if there is a benefit of a pre-simulation video to enhance the simulation training experience.

Methodology
We have designed and produced a video utilising a first person perspective to add to the realism of the scenario and aid with the concept of the student observing what they would experience. The study will be a randomised controlled trial using a total of forty final year medical students randomised into two groups of twenty students. The test group will view the video prior to the simulation scenario, whilst the control group will not. The two groups will then run the simulation and quantitative data will be analysed with differences between “time to” of critical investigations and treatment decisions. Further quantitative data will be collected for human factor skills using the Anaesthetists Non-Technical Skills (ANTS) scoring system. Qualitative data will be collected from the students as to the perceived ease of use and helpfulness of the video.

Anticipated benefits
We hypothesise that through the use of the video students could gain a better experience as well as improve their performance thereby shedding light on a possible way of making better use of the precious resource of simulation training.

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Paper withdrawn
Comprehensive framework to support and assess surgical training progress

S Isreb, J Illing, J McLachlan, H Hesselgreaves, S E Attwood
S Isreb, PhD student, School of Medicine, Pharmacy and Health, Durham University, Queen's Campus, Post graduate office, Stockton-on-Tees TS17 6BH

Background and Purpose
Surgical trainees have to train within a fraction (1/5th) of the previously recommended training time and reach competency with only two thirds of the minimum recommended operation numbers. Simulation training was proposed to cover this gap, however randomised control trials have failed to establish the practical value of such an approach. This research involved the development of a new surgical assessment framework to respond to the competency based curriculum challenge: how to enhance training and assessment within the United Kingdom current surgical training environment.

Methodology and results
Methods include implementing a design based approach and conducting a feasibility study as well as a qualitative observational study in theatre. The framework was developed using laparoscopic cholecystectomy as a model to create a two-step formative assessment system similar to the UK computer hazard perception driving test. The first step covers specific operation knowledge and possible surgical hazards. It uses multiple choice questions and extending matching items with a combination of sketched and live images and real operation video-clips. These elements are organised in a specific way to enhance learning by establishing topic relevance, exaggerating differences, reducing topic-shifting brain-tiredness and replacing error justification with error meditation strategy.

In the second step, trainee and supervising trainer will review a video-recording of their own operation recorded in a synchronised way to capture the hand manipulations and the resulting intra-abdominal operation progress.

Trainees and trainers qualitative and quantitative feedback have been used to improve the design during the project.

This study involved overcoming relevant legal and ethical challenges. The design has been piloted and over 20 trainees were recruited to undertake the assessment/training package.

Discussion
This research aims to enhance patient safety by improving the quality control of the final training product: surgeons. To achieve this we have created a novel assessment package and conducted an implementation study to establish the value of this assessment system in enhancing training and highlighting possible surgical operation complications with relevant avoidance and risk mitigation strategy. Observing trainee’s own operation-recordings maximises the benefit of current training opportunity by enhancing reflection and both internal and external feedback.

Trainee and trainer qualitative feedback has been collected to improve this system and determine the system users’ acceptability while conducting the theatre qualitative observational study to look for any events interrupting the operation progress and conduct a root-cause analysis.
Depends on your perspective: A randomised controlled trial comparing first person and third person perspective videos for clinical teaching

J Fukuta, J Hollamby, J Morgan
J Fukuta, Clinical Teaching Fellow, North Bristol Academy, North Bristol NHS Trust, Learning & Research, Southmead Hospital, Bristol, BS16 1LE, BS10 5NB

Background and Purpose
Videos have been used widely within medical training demonstrating practical skills\(^1\) as well as clinical interactions with patients\(^2\) and have shown benefits over classical teaching methods in certain situations\(^3\). Classical videoing techniques often involve a third person perspective owing to technical ease, however, students can feel detached from the experience as the third person perspective gives the feeling of being outside and looking in rather than experiencing the scenario. It is argued that by making the learning experience more authentic and experiential it can be improved\(^4\). One way in which this could be done is by using first person perspective videos and with improved technology filming like this is now easier. Some work has been carried out into the use of first person videoing for clinical scenarios\(^5\), however a direct comparison has not been made between videos shot in first person and third person perspective. We hope to investigate whether a clinical scenario in a first person will be more engaging for students and will lead to a better learning experience compared to the traditional third person perspective.

Methodology
We will film a single clinical scenario of the management of acute pulmonary oedema but will generate two videos one in first person perspective and the second in third person perspective. We will then conduct a randomised controlled trial with thirty, third year medical students with two groups of fifteen students. All the students will sit a pre-test questionnaire regarding the investigation and management of pulmonary oedema. The control group will then view the third person perspective video, while the intervention group will watch the video filmed from first person perspective. Both groups will sit a post-test questionnaire to see if there is a difference in learning. They will then be able to view the alternative video and be asked qualitative questions on which video they prefer and why.

Anticipated benefits
We hope that with the use of a first person perspective video it will lead to a more engaging and enjoyable learning experience and ultimately to a better understanding of the topic.

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5 Lynch K, Barr N and Oprescu F. Learning paramedic science skills from a first person point of view. 2012 Electronic Journal of e-Learning 10:4
Design and evaluation of a video on how to examine the cardiovascular system

R Rabintharan, A Elamass, MS Nazir, YR Tow, S Daly, R Ray
M S Nazir. Department of Cardiology, Clinical Academic Group, St George’s University Hospital, Blackshaw Road, London, SW17 0QT sohaib.nazir@gmail.com

Introduction
The examination of the cardiovascular system is an essential skill to acquire by medical students and junior doctors. There is a wide variation in the performance and technique of this examination. The use of video as a teaching and learning tool was proven beneficial in enhancing learning of physical examination. Hence, a video on how to examine the cardiovascular examination was designed to standardise the examination technique and to teach learners using innovative video technology.

Design
We designed an interactive video on how to examine cardiovascular system. In the video, the examination technique was demonstrated on a volunteer by high calibre senior cardiology registrar. This video is freely available on youtube (https://youtu.be/GlxlupTxijo) for learners across the globe.

Methods
An eight minute video was filmed to demonstrate the technique were clearly demonstrated and highlighted with annotations. Key points and common pathologies were embedded in the video to enhance retention.

Video evaluation – 34 learners completed feedback on survey monkey composed of close ended questions using a five point likert scale and open ended questions. Qualitative analysis were undertaken to evaluate the video through focus group discussions.

Results
Analysis of ratings in educational content and presentation of video (5 points scale) demonstrated ratings of above 4 in all domains (see Fig.1). All learners perceived this video to be of educational value and 97% perceived this video would help them in examining patient in future.

Discussion: Results demonstrated that this video is well received and a highly useful resource in medical education. Advantages of using video and demonstration of physical examinations are able to simplify complex concepts, demonstrate concepts that are in motion, efficient and effective in gaining audience attention and able to present more information in a given amount of space. However
challenges of technology including access to resources and relative high costs of production do limit the use of video. This evaluation was undertaken in 34 medical students from one institution.

**Conclusions:** This examination video on how to examine the cardiovascular system was designed to standardise examination technique. Results and feedback confirmed excellent evaluation although further evaluation through a larger group of heterogeneous users across the globe and effect on formative examination performance may be used in the future to validate the video.

**References**
De-stressing the stressful simulation

C Banks, J Barr, T Goddard, D Majumdar
C Banks, Swindon Academy, Great Western Hospital, Marlborough Road, Swindon, SN3 6BB

Background and Purpose
The growing practice of using simulation in medical education is based on its ability to ‘bridge the gap’ between theory and practice\(^1\) and that retention of knowledge is increased through participation\(^2\). However for many health care professionals simulation is associated with anxiety and fear of failure which can be difficult to allay. Unfortunately there are also findings that show a memory impairing effect of learning under stress in humans\(^3\).
Modifying the simulations to reduce participants stress levels could remove the realistic impact of simulation and therefore its efficacy. Subsequently we have developed a project comparing standard simulation sessions to those which additionally provide students with a video of their simulation and feedback. This will enable the student to review their simulation without the influence of stress and therefore reinforce their learning at home. This will hopefully improve the overall learning experience.

Methodology
Simulation sessions are delivered to all students on their Anaesthetics placement. Each student will receive a standard simulation session and debrief, followed by another simulation session and debrief, this time with the addition of a video of themselves to take home. Data will be collected using simple paper questionnaires evaluating the students’ perspectives of each method. Questions will be asked on a semantic differential scale of 1-10. Qualitative data will also be collected using free text boxes and thematic content analysis performed.

Results
Data from students on their anaesthetics placements from January to May 2016 (n=23) will be analysed using a Mann-Whitney U test. This will determine whether reviewing a video of their simulation and feedback was felt by the students to improve their learning outcomes in simulation sessions.

Discussions & Conclusion
As simulation is now commonplace in anaesthetics teaching, it is important that we consider how to ensure students get the most from their experience. By providing them with a video and encouraging self-reflection we hope to mitigate the detrimental effect of stress on their long term learning. If this is successful it will provide evidence for offering all students participating in simulation with this video resource to supplement their learning.

References
Developing a teaching video demonstrating the clinical examination of the vestibular system

L. Geller, JA McDonald, A Waddell
L Geller, Swindon Academy, Great Western Hospital, Marlborough Road, Swindon, SN3 6B

Background
Balance disorders are common with vertigo being the presenting complaint in 30% of all consultations in neurology, otolaryngology and old age medicine. Junior doctors encounter patients with these symptoms across a variety of settings and it is important that they are able to apply a complete and structured approach to examination of the vestibular system.

Our own experience suggests that this is not routinely taught as part of the undergraduate medical curriculum and that textbooks vary in their description of this exam. We felt that this represented a gap in undergraduate medical education and wanted to explore the need for, and to develop, a teaching resource which provided a concise yet comprehensive format for the examination of the vestibular system. Our target audience was medical students and junior doctors and a review of the literature on andragogy convinced us that a video would be the most effective way to demonstrate the examination. We hoped to use our creativity to produce a teaching resource which was memorable, engaging and unique and would appeal to a broad range of learning styles.

Methods
The perceived need for this resource, and level of baseline knowledge, was assessed by responses to two online questionnaires distributed to medical students. Video content was developed by observing specialist doctors in balance clinics, liaising with other relevant specialists and reviewing a range of textbooks. With their consent, real patients were shown in the video enabling the demonstration of positive signs and an explanation of their meaning.

In this ongoing project we plan to distribute a post intervention questionnaire, once the cohort has watched the video. Comparison of pre and post intervention responses should enable us to establish the effectiveness of our video as a teaching resource.

Results
Initial data, which has yet to be formally analysed, suggests a perceived need for this new resource. Baseline data has been collected to establish preexisting knowledge and confidence. The video was successfully created and the cohort invited to view it online. We are in the process of compiling data based on the responses to the post intervention questionnaire exploring post intervention knowledge and confidence. Informal feedback suggests that after watching it students felt more confident in examining a patient with a balance disorder. Once all data has been collected we plan to statistically test for significance between pre and post intervention responses.

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Does interactive technology have a place in the classroom?

J Whitton, D Colliver, L Wells
J Whitton, Queens Medical Centre, Nottingham

Background and Purpose
Technology advances at an exponential rate. As educators we need to be aware of new advances and to trial them to see if they can improve the educational experience of the learner. An anonymous voting tool allows for an expression of opinion without the fear of being wrong. It also allows the user to immediately assess their own knowledge within their own peer group. By utilising an interactive voting tool within a didactic lecture format, can I encourage engagement in the learning process?

Methodology
Weekly lectures were delivered to groups of undergraduate medical students varying in size from 6 – 12 people. The topic was acute abdominal pain in children and followed a case based format. The content was delivered by using powerpoint to set the scene and mentimeter as the voting software to allow the learners to work their way through the case. A feedback form was built into the interactive questions asked of the audience, using a scale of 0 – 5 (0 being very poor and 5 being very good). The lecture lasted an hour and was run over an 11 week period.

Results
77 students in total participated in the lectures over the 11 weeks. The median number of students for any given lecture was 8. The percentage participation was 98%. The mean rating for the lecture material was 4.57/5. The mean rating for the lecturer was 4.82/5. The mean rating for the voting tool was 4.72/5. The feedback comments that were made were entirely positive and asking for more interactivity in other lectures.

Discussion and Conclusions
Interactivity using an anonymous voting tool is well received within the didactic lecture format, for undergraduate medical students. It allows a novel approach to problem solving and engages the entire classroom in the discussion. It often led to greater verbal interaction too.
Does social learning increase engagement in online courses for healthcare professionals?

V Rodrigues, E Player
VC Rodrigues, Head, Department of Medical Education, Norwich Medical School, University of East Anglia, Norwich NR4 7TJ, UK.

Background
All postgraduate trainees in the UK receive clinical supervision as part of their training. It is recognized that clinical supervisors need training.\(^1\) Traditionally this has been delivered via face to face courses but with increasing time pressures and complex shift patterns, accessing such courses is difficult. To meet this challenge, we developed a two-week massive open online course (MOOC) to provide technology enhanced learning to clinical supervisors.\(^2\) The course was conceived, developed and facilitated by a group of experienced medical educators from various specialties, including a postgraduate doctor. We used the FutureLearn platform which promotes social learning through conversations and interaction at every step.\(^3\) This facilitates the building of communities of practice that facilitate learner interaction, collaboration, and learning.

We explored learner perceptions of the course, in particular the value of social learning in the context of busy healthcare professionals.

Methodology
Data were obtained from pre- and post-course surveys for each run of the MOOC (March, July and November 2015), FutureLearn course statistics, and thematic analysis of learner comments.

Results & Discussion
We had 7,225 course registrants over the year though 6% of these left the course without starting. Of the 3,055 learners who began the course, 35% (1073/3055) were social learners who interacted with other participants. Around 31% (960/3055) of the learners participated fully in the course; this is significantly higher than the FutureLearn average of 22%.\(^4\) Responses to pre- and post-course surveys suggest that 68% of the learners worked full-time, with over 75% accessing the course at home or while commuting, using laptops, smart phones and tablet devices.

Learners found the bite sized videos, animations and steps manageable at the end of a busy working day. Learner comments suggest that interprofessional discussions and social learning made the learning environment more engaging despite having several hundred international participants on the course during each run. Many of the discussions were rated as high in quality and led to sharing of narratives and personal reflections, as well as resources relevant to the discussions. Limitations common to other MOOCs include a large number who enrolled but did not take up the course.

Conclusion
Social learning added a new dimension and provided the interaction possible in face to face courses whilst being delivered in an online environment. Further research is needed to assess how learners use the new knowledge and skills in their workplace settings.

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Exploring medical students’ use of social media and other websites.

M Williams, M Corrigan
M Williams, Centre for Medical Education, Mulhouse Building, Royal Victoria Hospital, Belfast, UK, BT12 6BJ

Introduction
The use of social media for medical education is just beginning to be appreciated and studied. Benefits of social media for learning are said to include ease of use, learning on the move, collaborative learning and unlimited access (1). A systematic review of social media for medical education included nine papers published from January 2002 to 2012, providing a varied series of case studies (2). Satisfaction and engagement with social media in the studies’ varied medical educational settings was generally positive. Only two of the nine papers included UK medical students. The aim of this study is to explore the use of social media and the web by medical students.

Methods
A questionnaire using a Likert scale and free text will be sent to all medical students from years 1 to 5 at Queen’s University of Belfast. Questions will explore the use of specific social media sites inside and out of class, for educational or other reasons. The quantitative questions will be analysed using SPSS for descriptive frequencies, and for associations in a non-parametric fashion and the free text questions will be analysed using thematic analysis. Two focus groups will be held to explore themes in greater depth. The focus groups will explore the strengths and weaknesses of different social media, on how educators could make better use of social media and on any other themes of interest as they emerge.

Results
No data has been collected yet. Ethical approval for the study will be sought in January 2016 with a view to beginning the study in February 2016.

Discussion
The results will offer an insight into the potential for using social media or other websites to reach students for pertinent educational purposes, and the potential for related distraction during class.

References
How are clinical photographs currently used for the purposes of teaching and learning by tutors and students in medical schools within England? Can this knowledge be used to develop the content of a medical image library to make it more relevant to teaching and learning in medical schools within England?

C Dakin, E Coates.
C Dakin, Clinical Collections Coordinator, Wellcome Trust. 215 Euston Road, London, NW1 2BE.

Background/Purpose
To design and conduct an investigation into how clinical photographs are used by tutors and students working and studying in medical schools within England in order to make decisions about medical image library content development and future delivery methodologies. The study explores the use of clinical photographs for the purpose of learning and teaching in seven medical schools within seven geographical regions in England. The Wellcome Clinical Images Collection (WCIC) is an online resource of Clinical Photographs and it is hoped this research can be used to inform its development and future use.

Methodology
Research comprised multi-strategy methods. The designs used were cross-sectional survey research and single-case study research. Data collection methods were a self-completion online survey and face-to-face semi-structured interviews. IBM SPSS Statistics 21(SPSS) was used in the quantitative analysis whereas cross-sectional indexing was planned for the qualitative data analysis.

Results
The sample proportion of students using clinical photographs was 0.87 ± 0.04 (CL 95%). Use of clinical photographs in teaching and learning is not dependant on students role (Pre-clinical/Clinical) p= 0.217. The medical subjects within which clinical photographs were considered by students as most useful were Dermatology: 0.71 ± 0.06, Clinical Radiology: 0.59 ± 0.07, Infectious diseases: 0.51 ± 0.07. The majority of students were not aware of the Wellcome Images Clinical Collection p=0.92±0.03, however the sample proportion for those who were ‘Very’ or ‘Quite’ likely to access a picture library such as WCIC made available through their medical school library was 0.92 ±0.03.

Discussion and Conclusion
Clinical Photographs are widely used by medical students despite the numerous other learning resources available to them. They are particularly useful in the learning of some specialties when compared to others and it appears that a medical image library such as WCIC would be utilised were it made more visible within the student population and perhaps further work with students and tutors can make its content of further relevance to their learning.
Improving Medical Student Genitourinary Medicine Experience (IM GaME)

J Morgan K Nettleton S Unter C Morgan J Cassell
J Morgan, Clinical Education Fellow, Warwick Hospital, Lakin Road, Warwick, CV34 5BW

Background
Incidence of sexual transmitted infections is increasing\(^1\); however time devoted to teaching undergraduates genitourinary medicine (GUM) is decreasing\(^2\). Barriers to student exposure include clinician anxiety, patient discomfort and time pressures. Additionally, commissioning competition and outsourcing of GUM services into general practice\(^3\), has resulted in reduced student exposure in some secondary centres such as Warwick. Despite this, knowledgeable doctors who confidently initiate sexual history taking find their patients more willing to discuss sexual issues\(^4\) and half of graduates will be required to demonstrate these complex communication tasks in their careers\(^5\). Traditional student exposure of observing practitioners and attending lectures does not provide students with all necessary tools to conduct these consultations themselves\(^6\). Methods seeking to improve student GUM experience include simulation and small group teaching but increase teaching contact time in an already stretched curriculum\(^7\). There remains uncertainty as to the most efficient, effective way to deliver a comprehensive GUM curriculum. Our IM GaME course aims to address this issue.

Method
Final-year students allocated to Warwick Hospital completed the IM GaME course comprising six hours of interactive learning. Experiences included; critiquing videoed simulated consultations, practicing examination in Objective Structured Clinical Examinations (OSCEs), student-led simulated consultations and a formative single best answer MCQ (multiple-choice question) paper. Students were also able to further discuss a portfolio case. Post-course questionnaires evaluating student confidence and experience were collected. A control group of traditionally taught students also completed the MCQ paper.

Results
Preliminary results are from 37 students; 17 who participated in the IM GaME course and 20 control students. Students felt they had been given “constructive feedback” on consultation skills, enjoyed “variable interactive teaching styles” and the “chance to practice skills”. The students in the intervention group scored on average 12 percent better on the MCQ paper than those in the control group. An unpaired student t-test was applied to the results of the MCQ. The results were found to be statistically significant \((t=4.0430, p=0.0003)\).

Discussion
Our study has shown that final-year medical student knowledge and confidence in GUM can be improved in a time effective manner. The IM GaME course contact time was less than at other Warwick Medical School (WMS) affiliated sites or nationally\(^7\). Potential drawbacks include; the availability of faculty, a lack of clinical exposure and the knowledge-only assessment method. Our innovative course has been assimilated into the WMS refreshed curriculum across three hospitals which will allow further gathering of evidence as to its effectiveness.

Bibliography
2. Cowan FM and Adler MW (1994) A survey of undergraduate teaching in genitourinary medicine in Britain Genitourinary Medicine 70(5); 311-313
Innovation in medical school: Should we be teaching our students to code?

C Morton, T Lwin, M George, M Williams
C Morton, Clinical Education Fellow, Medical Education Research Unit, Faculty of Medicine, Imperial College London, Exhibition Road, London, SW7 2AZ

Background and Purpose
The ability to construct computer programs (“coding”) is increasingly recognised as a key skill. With the world becoming increasingly digital, the ability to construct and share computer programs is an evolution of functional literacy. Coding is now being taught to primary-school children world-wide, but the current generation of undergraduates have largely missed out on these lessons. Innovative technology such as apps, interactive websites and custom-built research tools are becoming more commonly used by patients, healthcare professionals and researchers. However, there are few people who have both a medical background and have the ability to understand, let alone write, software. We sought to identify whether there was a role for the medical school curriculum to teach coding to students to help bridge the gap between doctors and the technology industry, and facilitate greater collaboration.

Methodology
We designed and ran a 2-day coding courses (in July 2015 and Feb 2016) to introduce two self-selected cohorts of medical students to the basics of coding. They were then set a challenge to come up with a very small, simple programme. Using 2 focus groups, we discussed with the students whether they thought that coding has a place in the undergraduate curriculum, and if so, what was that place. We also looked a couple of case studies of students who had done the course and then went onto work on projects using those skills.

Results
Four major themes emerged from the data from the first focus group 1) Understanding of coding 2) Medical School’s role 3) The Future 4) Concept of a fun challenge. (This themes might change after analysis of the second focus group planned for mid-February 2016).

Discussion and Conclusion
Students valued learning something different from their medical studies and identified that they had gained an understanding of not only what coding is, but what its potential is. They could see its use for themselves personally (for example, developing and marketing a health app) but also how it has the potential to help the health service and research if more healthcare professionals understood the language of coding, the feasibility of projects and were able to collaborate more effectively with professional coders. Students identified that learning about coding was different from digital literacy and it should be offered as part of medical school but not as a mandatory course.
Inter-professional Non-technical, Clinical and Assessment Skills in Emergencies (INCASE): A multidisciplinary approach to high-fidelity simulated human factors training

A Colhoun, J Swift, R Griffiths, T Shaw
A Colhoun, Leadership and Quality Improvement Fellow, Rotherham NHS Foundation Trust, Moorgate Road, Rotherham, S60 2UD

Background
Human factors are an emerging area of education to improve patient safety. High-risk organisations such as aviation have applied human factors to develop safety-training programs through simulation for many years. Human factors are defined as “the environmental, organisational, job factors, and human individual characteristics, which influence people at work”. We identified a lack of availability of this training within our trust and a simulation course, which would benefit from updating.

Methods
We reviewed available feedback from trust simulation courses to enable us to set a course suitable for the multi-disciplinary team. Overwhelmingly participants felt to get the most out of sessions they needed stay and act within their own job role. We sent out pre-course information and suggested watching two videos that investigate medical incidents where human factors contributed to morbidity. The introduction to the day included a presentation to expand on the pre course material, to highlight how different people can see the same thing and react in different ways. We chose a range of clinical scenarios, run in real-time using a high fidelity manikin and spent a similar amount of time discussing how human factors were implicated. All participants were asked to complete a course evaluation.

Results
17 F1 doctors, 8 nurses, 2 advanced practitioners and 2 Operating Department Practitioners attended over 4 courses. 100% of all participants said: they would recommend (either strongly agree or agree) the course to others; felt the faculty provided adequate support; there was adequate time for discussion; the course met their educational needs; and the delivery style was clear and understandable. The only area with less than 90% positive feedback was the pre-course material only 51% feeling they benefitted from this.

Discussion
Incorporating human factors into scenario simulation training allowed us to identify many areas with participants where human factors influenced behaviours and actions. Combining learning styles (videos, presentations, simulation, group verbal feedback discussions) allowed reinforcement of learning and we advocate this as useful method of teaching human factors.

From the first two courses it was unclear if participants found the pre-course material unhelpful or it was not accessed. Changing the evaluation wording for the following courses we found 66% found the pre-course material useful but only 50% accessed the videos. This could reflect a lack of understanding of the influence of human factors prior to the course or that participants felt the videos did not add to their learning.

References:
Is a half-day peer-to-peer teaching course an effective method of increasing awareness and use of eLearning resources amongst teaching fellows?

M George, S Hogan, L Dormandy
M George, Charing Cross Hospital, Fulham Palace Road
London W6 8RF

Background
Imperial College is one of few medical schools to provide iPads to their students, making technological resources central to their learning experience. In response to this we designed an event aimed at disseminating knowledge of in-house and global eLearning resources to Teaching Fellows at Imperial College. To our knowledge this was the first dedicated teaching fellow event designed to do this.

Aim
To increase Imperial College teaching fellows' awareness and use of eLearning tools.

Methodology
The event consisted of an afternoon structured around two different themes: globally-available tools and In-house resources. Five applications deemed suitable for use in medical education were selected by the researchers on the basis of utility and accessibility in a variety of different skills and settings, based on the researcher’s own experiences. These applications, namely Mentimeter, Mindmeister, StudyBlue, Prezi, Twitter and Biodigital Human, formed the subject of a workshop, whereby participants received tuition on how to use them. Participants were also informed of the eLearning facilities available to them in-house, and were trained to use them to their full potential. 22 teaching fellows attended the meeting and questionnaires were sent out to all participants prior to the event. An identical follow-up questionnaire was then sent to all participants two months after the event.

Results
We received eight initial responses and five follow-up responses. The awareness of specific technology based education resources increased from 58% to 72%, whereas the usage of these resources decreased from 22% to 16%. Participants were also asked to rate how they felt about the utility of technology-based educational resources. The rating of online learning tools, smartphone apps and social media increased by 8.3%, 7.3% and 25% respectively, whereas the ratings of eBooks and medical education specific websites reduced by 9.2% and 11% respectively.

Discussion and Conclusions
This study demonstrated that a half day peer-to-peer teaching course on technology in medical education raised awareness of specific teaching resources and increased participants perceptions of the usefulness of certain technologies, in particular social media. However the general uptake and utility of these resources was generally low both before and after the event. It is known that the adoption of new technologies often goes through a ‘hype cycle’ which may explain why, despite having a growing number of technology-based educational resources, this has not equated to a similar rise in its uptake.

References
Nav-e-gating toward a new future

J Whitton, A Fecowycz, D Colliver
J Whitton, Queen’s Medical Centre, Nottingham

Background and Purpose
The University of Nottingham is expanding the online delivery of medical education for undergraduate medical students. When students learn paediatric surgery, they visit the department for a week. Half of the students will be based at another location and most will not be familiar with the layout, function of the wards and what is expected of them in their surgical week. The current practice is to send a detailed email with all the information. We wanted to create an electronic resource which could do this and work on all smart phone platforms.

Methodology
Utilising the Xerte bootstrap template with some additional code added in (making it more user friendly), a navigational package was creating on an eLearning platform. It contained all the necessary information, links to eLearning resources and is specifically designed for smart phone use. Evaluation forms were embedded in the package using a standardised format. The users were asked to evaluate ease of information delivery, if they would recommend this platform for other placements and ease of use of feedback tool. The ratings were from 0 (very poor) to 10 (very good).

Results
No data is currently available.

Discussion and Conclusions
This method of assisting students in their placement is designed to fit into the expanding world of online delivery. The ease with which it loads on to smart phone devices allows the user more choice as to how they access information. It fits into the current plans for digitalising student experiences and is more amenable to changes in the future.
No money, no time! Is e-Learning the future of post graduate surgical education?

D Hughes, R Bamford, I Langdon, CD Rodd, J Coulston
D Hughes, Severn School of Surgery Core eLearning Working Group

Background and Purpose
Within the current surgical training environment, a significant emphasis is placed on junior surgical trainees acquiring core operative skills in addition to essential clinical knowledge. Difficulty may arise from balancing clinical exposure and independent study. Financial constrains may restrict junior surgical trainees from acquiring and utilizing educational resources. Our aim was to asses whether e-learning was a suitable teaching platform for junior surgeons.

Methodology
A focus group consisting of junior and senior surgical trainees was established in order to assess whether e-Learning as a teaching modality had a role within post graduate surgical education. The syllabus of the current Intercollegiate Surgical Curriculum Programme (ISCP) was assessed to identify subjects that were amenable to e-learning. A questionnaire was created in order to capture current surgical trainee’s opinion regarding e-learning. A combination of question (both open questions and graded response questions) were utilized in order to capture both quantitative and qualitative data. The questionnaires were distributed amongst core surgical trainees within the Severn deanery.

Results
20 questionnaires were distributed to core surgical trainees within the Deanery who attended a Core Knowledge training day, of which 15 questionnaires were completed and returned. The sample size consisted of 7 first year core surgical trainees and 8 second year core surgical trainees. 53% had passed their final membership exam (MRCS)

93% of the cohort felt that e-learning was a valuable learning tool for surgeons in training. Over two thirds (87%) felt that e-Learning provided them with an opportunity to improve knowledge and skills in clinical scenarios they may not often encounter in the clinical environment. When asked whether their clinical practice had improved based on knowledge gained / skills learnt from an e-Learning module, 73% agreed with the statement. Specific questions were asked regarding the format of the e-Learning teaching platform. The trainees identified that a combination of teaching styles (73%) and the use of pre and post e-Learning multiple choice questions (67%) were the most important factors for a successful e-Learning module.

Discussion and Conclusions
Our results have shown that junior surgical trainees are of the opinion that e-learning is an appropriate teaching modality to be utilized by post graduate surgical education. Our data emphasizes that the e-learning content must be relevant and interactive in order to capture the attention of the junior surgical trainees. We aim to pilot an interactive e-learning module within the Severn deanery and seek direct feedback on its educational values for junior surgeons.
OnTake.co.uk: a novel, interactive, case-based e-learning resource to maximise students’ preparation for the Foundation Programme

Davies A, Burton H, Tay J, Botting N, Hall S, Sansom J
Davies A, 1 North Bristol NHS Trust, Bristol, UK 2 South Bristol Academy, Bristol Medical School, Bristol, UK 3 Musgrove Park Hospital, Taunton, Somerset, UK

Background
The transition from final year student to Foundation Programme doctor can be a daunting and stressful process, with less than 40% of UK graduates feeling “well prepared” for clinical practice by the time they leave medical school.1 However, the Department of Health suggests that teaching technologies and e-learning may help to improve students’ confidence,2 while the GMC continues to encourage medical schools to take full advantage of new technologies.3

The Resource
Using Adobe Captivate®, an interactive e-learning resource has been developed to help prepare students for their transition into the Foundation Programme. Students are given several cases set around the narrative of being “on take”; requiring them to interpret real images and sounds, choose investigations, make diagnoses and devise appropriate management plans. Cases are based on admissions data from the Department of Health, and are centred on the FP curriculum and Outcomes for Graduates as set out by the GMC.

Study Design
To evaluate the resource, we designed a single blinded randomised controlled trial, which will recruit final year medical students, and will include an e-learning group and control. Outcome data will include confidence scores, assessment results and focus group discussions. All students will undergo a pre-assessment in five domains, centred on identical FP and GMC curricula, and will include; clinical knowledge, interpreting examination signs, choice of investigations, diagnosis and management planning. Once the intervention group has completed the e-learning, all students will repeat the assessment. The examiners will be blinded to allocations and content of the e-learning resource. Assessment and resource material will be reviewed by senior faculty to ensure alignment with the agreed curriculum.

Results and Conclusions
A full demonstration of the resource and results of the study will be available for presentation. This will also include outcomes from student focus groups; exploring students’ reactions to the resource, and its impact on their learning and practice.

References:
Paramedic and medical student simulation: The importance of documentation

A Woodman, KA Else, JA McDonald, JE Hambidge
A Woodman, Swindon Academy, Great Western Hospital, Marlborough Road, Swindon, SN3 6BB

Background
The General Medical Council emphasise the importance of contemporaneous note taking and there are many examples for court cases resulting from inadequate documentation.¹ Clinical records are a vital link between health care professionals. They are integral to the safe and effective handover and ongoing treatment of patients from the pre-hospital environment to other settings. Accurate recording and management of these records therefore supports the delivery of effective patient care. The Health and Care Professions Council (HCPC) states that all paramedics are responsible for accurate record completion along with local trust policies.²

Method
Using the simulation facilities and hospital grounds at the Great Western hospital in Swindon, four half day simulation sessions will be offered to paramedic and medical students. This will be on a voluntary sign up basis and held between February - May 2016. Each session will accommodate 6x paramedic and 6x medical students who will be involved in three emergency scenarios (trauma, cardiac arrest and anaphylaxis). Each scenario will consist of a pre-hospital component for the paramedic students with continuation of the scenario into the simulated Emergency Department (ED), where they will meet the medical students. It is envisaged that the paramedic students will work in pairs to do the initial management, extrication and transfer. On arrival in the simulated ED, handover of the patient will occur and management will continue. During the pre-brief, preceding each scenario students will be asked to document the events that occur, with the paramedic students using the patient report form (PRF) and the medical students using their standard format of an A to E assessment, along with any prescriptions or investigations requested. Ten minutes will be provided at the end of each scenario to allow the students to complete the relevant documentation. These documentations will be compared to a video of the events, to verify if they are a true and accurate recording of the events.

Results
Anonymised data will be collected from a total of 48 students using transcripts from the real time videos and comparing these to the student’s documentation collected post-scenario.

Conclusion
The data will identify any omissions, insertions or inaccuracies and allow comparison between the paramedic and medical students. This can then be used to feedback to the students involved and demonstrate the importance of documentation, as reflected within both of their governing bodies.

References
Personalised recall app for enhancing medical knowledge retention: A pilot study

A Cripps, R Hart, J Edwards, D Zahra, A Chatterjee
A Cripps, Peninsula School of Medicine, Plymouth University, Drake Circus, PL4 8AA

Background and Purpose
According to Ebbinghaus (1), once a concept is introduced, only about 30% of the learning is retained by the end on the first 24 hours. According to Kerfoot et al., (2) medical knowledge learned by trainees are often forgotten and ‘spaced education’ could improve retention of student learning. This phenomenon has also been confirmed, based on personal and anecdotal experiences of the lead student author. The abundance of concepts to be learned in the first 2 years of a Medical Curriculum makes it incredibly challenging to manage the overall learning process in a systematic and effective way. This study aims to investigate the effects of an innovative personalised knowledge recall mobile application on learning satisfaction and recall of medical science concepts in undergraduate students.

Methodology
An overall mixed methodological approach has been adopted. An experimental pre-post-test control group design will be adopted involving the participation of learners in structured recall formats. An academic will create the instructional material around medical concepts outside of the normal pre-clinical curriculum and provide a session on the topic. Before this session the participants will sit an MCQ style test (T1) of learning specifically assessing the content from the session. Afterwards the students will be invited to attend a two tests, which will assess the same concepts. The pre-post structure of the study will allow us to control for prior knowledge by, for example, assessing differences in change in performance between the app and non-app groups. Nominal Groups (3) will be used to explore effectiveness of varying recall strategies.

Results
We have already developed the app and user tested it. The pilot is scheduled to run from January to March. This is a work in progress and we would share the results of the study during the conference.

Discussion and Conclusions
Previous studies show that repeatedly revisiting content that one learns improves their ability to retain that knowledge in the long term (4–6) and improved learning outcomes (7). The ‘Recall’ app has been developed which aims to simplify, structure, and streamline the recall process. The app calculates optimal future recall dates (based on the Ebbinghaus curve) for the learners and prompts them with a notification or email at the right time. We are hoping to demonstrate that the recall app enables students to better manage conceptual recall and enhances knowledge retention.

References

Pilot of the JASME Simulation Toolkit: Teaching students to educate using Simulation-based Medical Education

A Gopal, M Redman, D Cox, K Merrick, O Farooq
A Gopal, Junior Association for the Study of Medical Education, Special Interest Group of the Association for the Study of Medical Education, 12 Queen Street, Edinburgh, EH12 1JE, UK. hyag1@hyms.ac.uk.

Background & Context
Good Medical Practice recognises teaching as an integral part of the duties of a doctor, and should be supported throughout medical careers\(^{(1)}\). The Junior Association for the Study of Medical Education (JASME)\(^{(2)}\) runs regular toolkit day-courses\(^{(3)}\) to expose and develop members (medical students to foundation-trainees) in various practices of medical education.

Simulation-based medical education (SBME) refers to teaching using immersive medical scenarios, using principles of experiential learning combined with the ability to accurately replicate and control the scenario\(^{(4)}\). Following the scenario the learning potential of the scenario is captured and reinforced using active facilitated reflection via debriefing\(^{(5)}\).

With the implementation of SBME becoming widespread at both undergraduate and postgraduate levels and the popularity of our simulation scenario scripting workshop at prior ASME Annual Scientific Meetings (2014&2015), JASME’s national committee commissioned the design and implementation of a one day pilot course of a “simulation toolkit” for members; teaching students to educate using SBME.

Methodology
Our toolkit is composed of an interactive plenary covering the basics of simulation theory given by a local expert and two workshops;

1) Our existing scenario scripting workshop – instructs delegates in basic principles and practicalities of designing and providing a simulated scenario for learners.
2) A new bespoke workshop designed to expose and instruct delegates in basic debriefing principles; a plenary and demonstration, followed by a scenario and delegate-led debrief of simulated learners from the scenario. A debrief of the delegate debriefers by expert faculty follows.

It concludes with an expert panel Q&A discussion. The course was piloted at the Hull Institute of Learning and Simulation\(^{(6)}\)(10/10/15). Faculty was composed of local experts in simulation with JASME committee supporting all teaching and administration. Post-course questionnaires were utilised to assess educational value of the session.

Results
Quantitative feedback was scored using likert scale questions, from 1(very poor) to 5(excellent). The relevant, quality and usefulness of the simulation theory plenary (average ratings to 1 decimal point; relevance 4.1, quality 4 & usefulness 4.3), scripting (4.3, 4.6 & 4.5) and debriefing (4.6, 4.6 & 4.8) workshop were all highly rated, with delegates must also indicating the overall day to be well organised (4.3) and enjoyable (4.9). Qualitative feedback was also positive.

Conclusion
Our results indicate our simulation toolkit to be well received and useful to our members; we intend to deploy this toolkit alongside existing toolkits and continue to provide high-quality educational opportunities to the doctors of tomorrow.

References
2) Junior Association for the Study of Medical Education. What is JASME [Internet]. Association for the Study of Medical Education; 2009 [Cited 2015 December 30]. Available from: http://www.asme.org.uk/jasme/.
Piloting a novel e-learning laparoscopic surgery module for junior surgeons

D Hughes, R Bamford, L Langdon, CD Rodd, J Coulston J
D Hughes, Severn School of Surgery Core eLearning Working Group

Background and Purpose
The current Intercollegiate Surgical Curriculum Programme (ISCP) mandates that junior surgeons are able to utilize surgical instruments correctly, handle tissues accordingly and assist with unfamiliar operations. Laparoscopic surgery now serves as a first line treatment option for several operations and junior surgical trainees must be familiar with its concept. The surgical theatre is not always an appropriate teaching environment due to time pressures; complex cases and issues related to patient safety. It is essential that training can also occur out side of the operating theatre however; various aspects of laparoscopic surgery (equipment set up or instrument use) may be difficult to learn from conventional teaching methods. Our aim was to create a relevant, interactive e-learning module for junior surgeons providing them with a detailed overview of laparoscopic surgery.

Methodology
A peer group consisting of 9 junior and senior surgical trainees was established to identify the key aspects regarding laparoscopic surgery that were suitable to being taught through e-learning. These were mapped to the ISCP surgical curriculum for Core Trainees. A core trainee was supervised by a specialist trainee to create the content of the module and the learning interface was created in collaboration with eCancer. A range of teaching styles including video, an interactive virtual abdomen for port placement and pre and post course learner assessment was included. The final project was re-reviewed by the focus group for assessment prior to being peer reviewed by senior surgical faculty.

Results
The peer group agreed that the e-learning module should focus on areas of the curriculum that can otherwise be neglected and therefore highlighted the need for the module to revolve around the correct set up and use of the laparoscopic equipment and stack, initial port placement and physiological impact of laparoscopy. The consensus of the focus group was that the module had surpassed its brief and was a useful and effective interactive learning tool for core trainees.

Discussion and Conclusions
We successfully created a novel, interactive teaching platform on laparoscopic surgery. We addressed aspects of laparoscopic surgery which are often neglected in clinical practice and difficult to learn from surgical text books. This e-learning model is a practical guide to any junior surgeon who is involved with laparoscopic surgery. It provides them with a foundation of knowledge and confidence as they develop their laparoscopic skills.
PodLearn – E-learning Platform for Medical Students and Junior Doctors

M Khan, J Ouyang, H O’Sullivan
M Khan, Foundation Year 1 Doctor, Department of Postgraduate Education, University Hospital of South Manchester, Southmoor Road, Wythenshawe, Manchester, M23 9LT.

Background and Purpose
Medical education varies considerably with universities adopting numerous formats e.g. problem-based learning. Nonetheless, students vary in their preferred learning modalities, thereby raising issues if their learning style differs to their universities teaching style. Moreover, anecdotal evidence suggests that the quality and quantity of teaching is known to differ considerably between university-affiliated teaching hospitals, thus raising concerns with students placed at poor teaching hospitals who feel they have been disadvantaged in terms of learning opportunities despite paying the same tuition fees as their peers. We aimed to develop a novel platform that could address these issues by bringing together medical teaching resources across the country onto one centralised platform.

Methodology
To design our platform, we conducted an initial pilot survey of 31 medical students across 12 medical schools to understand the medical e-learning landscape and to discover their online learning needs and demands. Based on our findings we developed a free-to-access online e-learning platform known as PodLearn (http://podlearn.org). Through the platform, our target audience (medical students to junior doctors) could view, generate and contribute to a centralised database of audio/video medical teaching podcasts. Consequently, users can supplement existing their existing learning with podcasts developed in their preferred learning style. To evaluate our platform we have collected and analysed case studies and we will collect “user journeys” from medical students that will provide richer feedback and a deeper understanding of their learning experience.

Results
Since launch in September 2014, the platform has acquired over 1300 users, 350 contributing doctors and 420+ video podcast submissions. Initial case studies from users have noted a preference from short “snack-sized”, screen-capture podcasts and so, the platform now predominantly focuses on catering for such podcasts. Additionally, junior doctors noted being more eager to participate in education due to the streamlined process of generating and submitting podcasts to the platform at their own leisure. Moreover, we have secured backing from e-learning teams at the University of Liverpool and Imperial College London in addition to, working collaborations with the Higher Education Academy and Cochrane UK.

Discussion and Conclusions
PodLearn is being evaluated through case reports and by invited reflective “learner journeys” which in turn, allow us to demonstrate the education principles that underpin PodLearn’s success. Overall, PodLearn provides a novel means of supplementing existing teaching resources with podcasts generated by medical students and doctors alike across the UK.
Simulation as an undergraduate teaching tool for child protection

A Woodman, R Holman, J Hambidge, A Brooks-Moizer, P Nguyen, K Jones
A Woodman, Swindon Academy, Great Western Hospital, Marlborough Road, Swindon, SN3 6BB

Background
Safeguarding of children is the responsibility of all healthcare professionals in any healthcare setting and it is important to have a basic level of awareness when entering the medical profession. Child safeguarding is a mandatory course in postgraduate medicine and often taught in lecture style. There is some evidence to suggest simulation training is an effective means of teaching child safeguarding issues\(^1,2\) and has been suggested as a way of practicing skills that are infrequently used\(^3\). However no evidence has been found for the development of child safeguarding teaching in undergraduate medicine. Last year clinical teaching fellows designed and delivered a child safeguarding simulation session using scenarios that may be encountered at junior doctor level in various hospital based settings.\(^4\)

Methodology
Following the pilot this has been expanded upon this academic year. With the learning outcomes generated based upon the undergraduate curriculum for paediatrics at University of Bristol. Topics covered included non-accidental injury, accidental poisoning and neglect. Focus was on awareness and recognition of safeguarding issues, initial management and subsequent process of investigation. A total of 32 students will participate in 2015/2016, and feedback will be collected on their experiences prior to and following the simulation. We will obtain written feedback on the session and take a multiple choice questionnaire testing their knowledge on safeguarding principles and procedures.

Results
We will add data to the results from the previous pilot and conduct focus groups to provide qualitative data.

Discussion
The pilot indicated that interactive child protection teaching using real time simulation encouraged students to see the relevance and importance of child protection issues for future practice. We will draw further conclusions for our extended data and we anticipate that simulation may help students retain information on child protection procedures.

Reference List
SonoSim Ultrasound Simulator: An Innovative Educational Tool For The Modern Clinician

A Raja, N Murch
Corr N Murch, Royal Free Hospital, London

Introduction
As technology gets more affordable and portable, point-of-care ultrasound (US) is fast becoming an integral part of bedside clinical medicine. Educators have utilised a range of US simulators that have shown to benefit user experience and improve patient care. We have acquired a SonoSim US Simulator which consists of a purpose built probe linked to case specific US images and online modules.

Reaction
Clinician interest has been high, resulting in a number of innovative, multi-disciplinary educational projects. Sonosim was integrated into a Core Medical Trainee (CMT) course, where chest and abdominal modules were demonstrated as an adjunct to paracentesis and pleural procedural training. Cardiac tamponade cases were utilised as part of a high-fidelity cardiac arrest scenario. Peripheral access modules were used in an US guided cannulation course for foundation trainees (FT). Feedback obtained from trainees has been positive and has generated further interest in US training.

Learning
CMTs have communicated increased confidence in procedural skills. Radiology trainees have expressed the need for US simulation to increase exposure to rare and complex pathology. FTs will be offered access to online modules to formally assess their knowledge on peripheral venous access.

Transfer
All trainees will be followed up to assess behavioural changes towards US training. Work based assessments will be reviewed to further investigate CMT procedural competency. Follow up surveys of FTs will be compared with original data to assess for changes in cannulation confidence levels. Formal assessments of radiology trainees over time will be used to investigate the impact of US simulation on their training.

Results
Long term impact on patient care will be measured where possible. Cannulation success rates and number of referrals to vascular access services will be compared pre- and post-training for FTs. Qualitative data from relevant specialty registrars, regarding the need for assistance with procedures, will permit further assessment of clinical outcomes. Accuracy of radiology trainee reports will be used to measure clinical impact on patients.

Conclusion
US simulation is an increasing useful tool for the modern clinical educator. We have show initial user benefit and follow up data will be obtained to assess for longer term impact. Further projects will be implemented in the coming months. Examples include use of US images to teach undergraduate anatomy, use of gynaecological cases to simulate an ‘acute gynaecological clinic’, and the use of interactive FAST modules on high-fidelity mannequins for emergency trainees.

References
Swindon Safeguarding Simulation

A Woodman, R Holman, J Smith, J King, M Natarajan
A Woodman, Swindon Academy, Great Western Hospital, Marlborough Road, Swindon, SN3 6BB

Background
Safeguarding of children is the responsibility of all healthcare professionals and ‘Level 3 Safeguarding Children’ is a national requirement of all clinical staff working with children, young people and / or their parents / carers. These health care professionals all potentially contribute to assessing, planning, intervening and evaluating the needs of a child and young person and parenting capacity where there are safeguarding concerns.

There is some evidence to suggest simulation training is an effective means of teaching child safeguarding issues\textsuperscript{1, 2} and has been suggested as a way of practicing skills that are infrequently used\textsuperscript{3}. However no evidence has been found for the development of child safeguarding teaching in a trust wide Level 3 rolling programme.

Method
Following on from last year’s work establishing Child Protection simulation for undergraduate medical students\textsuperscript{4}, clinical teaching fellows have collaborated with the named nurse and consultant for safeguarding at Great Western Hospital and developed safeguarding simulation sessions, to be delivered as part of a trust wide programme.

Simulation scenarios include a shaken baby, a teenager with deliberate self-harm and a pregnant lady who is found to be drinking alcohol. Five (3 hour) sessions have been scheduled, each with three scenarios for a maximum of nine participants. These sessions will be advertised to all trust staff requiring Level 3 refresher training, to then be recorded in their training passports.

All participants will be involved in all of the scenarios, with those not directly participating observed via a video link into a debrief room where each scenario will be discussed with a trained faculty member.

Results
A questionnaire to evaluate the teaching will be collated with likert scales and an open feedback forum will be held at the end of each session in exchange for signing of their training passport.

Conclusion
Following on from this pilot we plan to deliver this monthly as a rolling programme, with expansion into point of care simulation including testing of the child abduction policy for example.

Reference List
Swindon Simulation Saturdays: An additional tool to learning

A Woodman, R Holman, J Barr, M Natarajan, K Jones
A Woodman, Swindon Academy, Great Western Hospital, Marlborough Road, Swindon, SN3 6BB

Background
Simulation is fast becoming part of all undergraduate medical student curricula and evidence has shown that it is an effective and popular method of teaching.

At the University of Bristol in Swindon Academy the simulation suite is used to teach all medical students during their year 3 to 5 clinical attachments. Simulation sessions frequently score the highest feedback with many students reporting that they want more.

Not all students have placements at Swindon Academy and simulation provisions are variable therefore the idea of offering an optional Saturday simulation programme was launched.

Method
Ten half day simulation sessions were scheduled on Saturdays and advertised to all University of Bristol medical students via the medical student society; this received a huge uptake with all sessions oversubscribed. Each session was open to all year groups, with no cost and places allocated on a first come first served basis.

Simulation topics included anaesthetics, emergency medicine, human factors, medical specialities, obstetrics & gynaecology, paediatrics and surgical specialities. Upon signing up, students selected their preferred topic and each session was tailored to the student preferences within the group. Clinical teaching fellows delivered the sessions with the support of the simulation lead and Simpatico for technical support. Each session started with an introduction to the simulation suite, pre-brief of each scenario and was followed by an extensive teaching debrief.

Ten participants per session were involved in all of the scenarios, with those not directly participating observing via a video link into a debrief room where each scenario was discussed with trained faculty members.

Feedback forms were collated at the end of each session in exchange for a certificate of attendance provided.

Results
Initial feedback has been positive with students stating that it has been some of the best teaching that they have received. Full questionnaire results will be analysed following completion of the final session in March 2016.

Conclusion
Full conclusions will be drawn following analysis of the results. The predicted success of this programme supports the need for further funding of simulation provision at all academies with a view to establishing a rotating Saturday simulation programme.
Background
Many health professionals find talking to patients about lifestyle difficult, and aren't sure how best to be effective (Chisholm et al, 2012). Obesity is an increasing problem locally, nationally and internationally. Internationally, professional regulatory bodies expect that health professionals are able to carry out these complicated consultations. In psychology, researchers are developing effective behaviour change techniques, but these are not known by health professionals, and are not typically part of education in this area.

We developed a tool kit (Tent Pegs) for health professionals, and a teaching session for medical students and found it is acceptable, feasible and effective (Chisholm et al, 2015).

Methods
Health professional education curricula are crowded, and the logistics of finding space for new content is often very challenging. Therefore, we adapted our teaching session in two ways: 1. Into an interactive online teaching session and 2. For use multi-professionally. We carried out a mixed methods study, exploring before/after training exploration of attitudes and intentions, and semi-structured interviews.

Results
Midwifery students (n=61 final year students) took part in the session. We measured its usefulness through acceptability (by engagement in the interactive elements of the session), feasibility (usage data) and learning (knowledge questions at the beginning and end of the session); and interviews with a sub sample.

Discussion
We will discuss the challenges in converting a successful face to face session into e-learning; development of a session intended for one health professional group to ensure its relevance across a number of professional groups; the issues of engaging students with elearning and the effectiveness of this training.


The creation of a bespoke clinical teaching fellow e-portfolio – a pilot study

Z Hossenbaccus, YYS Ho, J Hawkins, C Earnshaw, M Sherwood, P Davies, ZA Dawood, CD Rodd
Z Hossenbaccus, Redwood Education Centre, Gloucestershire Royal Hospital, GL1 3NN

Background and Purpose
Clinical Teaching Fellow (CTF) roles vary widely, encompassing teaching, clinical exposure and medical education research. Roles are non-standardised and variably supervised. E-portfolios enable clinical trainees to document progress and support their professional development, but there is no CTF equivalent.

We have designed a bespoke CTF e-portfolio, which parallels aspects of existing medical and surgical trainee e-portfolios\textsuperscript{1,2,3,4}, with additional focus on teaching and medical education research. The latest technologies have been used to produce a portfolio for use across multiple platforms, including mobile devices.

Methodology
Gloucestershire Academy collaborated with the School of Computing and Technology’s Digital Media and Web Technologies Department at the University of Gloucestershire, in a 3-phased project.

Phase 1: Scope of the portfolio
The portfolio has been structured with breadth and flexibility to enable its use among all CTFs. Tailored Work Based Assessments (WBAs) focusing on the CTFs teaching development have been designed and include Teaching Experience Discussion (TED), Teaching Review Exercise (TReX) and Multi-Source Feedback (MSF). Dedicated sections facilitate logging of medical research, teaching and clinical experiences. Meetings with supervisors (research, educational and clinical) can be recorded in line with the existing clinical e-portfolio structure.

Phase 2: Technology
We employed modern web technologies (HTML5 and CSS3) to optimise usability and accessibility across multiple platforms (desktop, laptop, tablets and smart phones), with emphasis on the web-scripting language, JavaScript, to drive the e-portfolio’s core functionality, interactivity and navigation. Server-side languages (PHP and MySQL) have been used to securely process all data transactions between users and the e-portfolio, for example, the e-portfolio features secure login and remote access for supervisors to review progress and sign-off assessments.

Phase 3: The CTF e-portfolio will be piloted from January 2016 by CTFs and supervisors in Gloucestershire Academy, assessed by open-ended questionnaires and Likert scales. Particular emphasis will be placed on user experience design of the CTF e-portfolio among the Undergraduate Medical Education Faculty.

Results
Phases 1 and 2 of this project are completed and the product will be described. Phase 3 content analysis and data will be presented.

Discussion and Conclusions
The GMC Promoting Excellence guidelines\textsuperscript{5} will likely result in further CTF expansion and since all doctors must revalidate\textsuperscript{6}, the CTF role requires structure and evidence of Continuing Professional Development (CPD). The creation of a bespoke, user-friendly and flexible CTF e-portfolio, mirroring postgraduate trainee portfolios, is a significant step forward for CTFs’ development.

Reference
Cognitive errors that influence clinical diagnostic decision-making among medical students completing virtual patient cases

D Faraj, RI Norman, RS Patel
D Faraj, RS Patel, Department of Medical Education, University of Leicester, Leicester LE1 9HN

Background
Healthcare professionals can make cognitive errors (CE) during clinical diagnostic decision-making (CDDM) with direct consequences for patient care and outcomes (1). Cognitive factors and biases are intrinsic to CDDM however there is little understanding about the influence of these on CDDM among novices. This study explored the types of CE made by medical students working through a virtual patient (VP) case, so appropriate feedback could be given to individuals about the impact of cognitive factors on their CDDM.

Methods
A VP was created using a web-based simulation platform (http://cable.ocbmedia.com/player). Medical students in year three of the five-year Leicester MBChB course were invited to complete a VP alongside a facilitator. A facilitator created a cognitive map at the beginning and end of each clinical enquiry stage completed by participants during the VP case. A coding framework comprising of identifiable CEs was used to categorise observations into four groups: faulty knowledge, faulty data gathering, faulty information processing and faulty verification (1). The CEs were also coded alongside a cognitive map of their CDDM pathway through the VP case.

Results
Twenty medical students took part in the study. The mean number of CEs was 92 across participants during the VP clinical enquiry: 17% were attributable to faulty knowledge; 10% were attributable to faulty data gathering; 44% were attributable to faulty information processing and 22% were attributable to faulty verification. The range of errors made by participants across the cohort was 19 – 272 CE. The most frequently made CE was faulty information processing due to ‘overestimating/underestimating the usefulness/salience of a given finding’.

Conclusion
A number of CEs influence the CDDM of medical students at the transition from the pre-clinical to clinical part of their MBChB course. The use of cognitive maps may raise awareness among medical students about the influence of CEs on CDDM outcomes and provide a useful method for giving feedback about the quality of CDDM demonstrated by novices.

References
Using simulation to compare actual and perceived paramedic handover content in high pressure situations

KA Else, A Woodman, JE Hambidge, JA McDonald, M Natarajan
KA Else, Swindon Academy, Great Western Hospital, Marlborough Road, Swindon, SN3 6BB

Background
The British Medical Association has produced a document which highlights the importance of detailed and accurate clinical handover¹. This document also emphasises that clinical handover is a patient safety issue because ineffective handover has resulted in harm to patients¹. In emergency situations, it can sometimes be more challenging to ensure effective handover. This can also be compounded by the handover targets that are imposed upon paramedics. These time constraints may cause handovers to be rushed. We therefore aim to explore the quality of clinical handovers during emergency simulation teaching.

Proposed method
Using the simulation facilities and hospital grounds at the Great Western hospital in Swindon, we will be offering half day simulation sessions to paramedic (n=6) and medical students (n=6). This will be on a voluntary basis and we plan to run this on four occasions between February and May 2016. Each session will include three emergency scenarios (Trauma, cardiac arrest and anaphylaxis) which will be repeated in each session. These will consist of a pre-hospital component with continuation of the scenario in the simulated Emergency Department (ED). Two paramedic students and two medical students will be expected to participate in each individual scenario. We envisage the paramedic students actively participating in the initial management, extraction and transfer. On arrival in the simulated ED, handover of the patient will occur and management will continue.

During the pre-brief, students will be asked for their consent to film the scenarios. They will then be asked to transcribe their recollection of the patient handover immediately after each scenario.

Results
We intend to collect data from a total of 48 students. We will compare the transcripts from the real time videos to the recollections written by the students.

Conclusions
We can use this data to identify any omissions and discrepancies between the actual and perceived handover that occurred during the simulation. It is hoped that we can then use this to debrief the students and emphasise the importance of effective handovers.

References
Using technology to create a yardstick for student evaluation of the future

J Whitton, D Colliver, L Wells
J Whitton, Queens Medical Centre, Nottingham

Background and Purpose
Collecting and collating evaluation of teaching is a time consuming task for both parties, and there are many questions over its validity when it is enforced. However, without the qualitative and quantitative data provided by student evaluation, education cannot improve and adapt to suit the needs of the students.

Methodology
An anonymous voting tool was utilised to assess a teaching fellow of undergraduate medical students at the University of Nottingham. Students were asked to evaluate all types of teaching sessions delivered by the teaching fellow using a feedback form created in mentimeter.com. These included: Introductory lecture, weekly surgical lectures, clinical examinations lecture, communications small group teaching, bedside teaching and e-learning packages. This allowed anyone with an internet enabled device to access a voting form and deliver immediate evaluation. All evaluation was collected anonymously and using a standardised format. The teaching sessions were assessed over an 18 week period.

Results
750 votes were collected across 6 different sessions. The radar charts below demonstrate the mean scores for the voting tool and for the educator out of 5 (0 for very poor and 5 for very good):

![Usability score of mentimeter](image1)

![Quality of Teaching](image2)

All the comments surrounding the use of the voting tool were positive and asked for its repeated use within other education formats.

Discussion and Conclusions
The voting tool was well accepted and proved easy to use for the undergraduate students. The speed and ease of access to the data for the teaching fellow led to alterations in education delivery from lecture to lecture; quick amendments to the e-learning packages; and easy collation of data for the purpose of educational research. The cost of an annual license for access to this technology (£45) is less than the cost in time and paper to collect paper feedback, and was accessible immediately.
Paper withdrawn
Early Warning Score? Can participation in regular computerised formative assessment identify those at risk of poor summative assessment outcomes?

R Jay, M Hamilton, C Ling, D Kirtchuk
R Jay, rj16@leicester.ac.uk.

Introduction
Formative assessment is intended to help students develop and foster learning under non-threatening conditions. These assessments aid in the development of self-evaluation skills against expected standards (1), a key element of undergraduate education. A medical course requires considerable investment in both financial and personal terms from both individuals and healthcare systems. Failure in medical school assessment can have significant consequences for students (2).

Methods for the identification and intervention of students at risk of failing examinations are of great importance. Studies have identified a relationship between students’ formative and summative performance (3). New technologies have created opportunities for staff to analyse student performance longitudinally. This allows interventions to be implemented prior to students failing summative examinations. Exam soft is an app that allows single best answer (SBA) formative assessments to be delivered to students at regular intervals. This study will examine the correlation between performance during these regular formative assessments against their performance in high stakes summative assessment.

Methods
Second year medical students from the University of Leicester were provided with weekly SBA formative assessments prior to small group teaching sessions during their gastroenterology unit. The software allows the students to work through the questions and receive immediate feedback (answers and explanations). The results are then uploaded onto an online portal where they can be analysed.

The results from the formative assessment will be compared against the results from the summative exams in January 2016. The analysis aims to detect whether there is a correlation between those students under performing in the formatives and those that score poorly on the gastroenterology summative questions. Correlation would suggest that regular formative assessments might allow the early identification of underperforming students. This would provide opportunities for early intervention, with engagement and analysis of their learning methods to minimise the risk of failure.

These results will be available for presentation at conference

References
Paper withdrawn
The clerking portfolio as an educational tool: the students’ perspective

J Hollamby, J Morgan,
J Hollamby, Clinical Teaching Fellow, North Bristol Academy, University of Bristol Medical School, Southmead Hospital, Bristol, BS10 5NB.

Background
Portfolios have been shown to enhance the learning of surgical skills ¹ however there is limited research surrounding the use of clerking portfolios in medical undergraduates. The University of Bristol Medical School mandates submission of a clerking portfolio at the end of both the junior and senior medicine and surgery blocks (JMS and SMS). Each case requires taking a history from and examining an inpatient then writing up and reflecting on the case. The portfolio is submitted for assessment.

Aim
The aim of this project is twofold: examine how students implement the clerking portfolio and explore students’ understanding of the educational objectives of a clerking portfolio.

Method
Medical students have been surveyed in the form of a paper questionnaire to gather quantitative data regarding the breakdown of time they spend with a patient and writing up a clerking portfolio case. Students were asked to rate the task of finding a suitable patient on a scale of 1 = very easy to 10=very difficult. Undergraduates from two Bristol Medical School Academies were surveyed. Focus groups are planned for January 2016 to obtain qualitative data regarding the students’ understanding of the clerking portfolio as an educational tool.

Results
74% of the students from the JMS and SMS cohorts approached to date completed the survey. JMS student data from South Bristol academy awaits collection. 79 questionnaires were returned, 76 complete. Analysis of the current data showed that both JMS and SMS students spend on average 3 hours per total portfolio case. The majority of students spend less than 50% of this time with the patient. SMS students spend a lower proportion of the total case time with the patient than JMS students. The average difficulty of finding a patient to clerk for a portfolio case was given a rating of 5.2/10. Focus groups will provide qualitative data to complement these results.

Discussion and Conclusion
Patients could be considered the most important learning resource for clinical students therefore is the patient resource being fully maximised if student spend proportionally less time per case with the patient? Pending qualitative data from focus groups is expected to lend further insight to these results.

Relevant references
The Impact of Weighting of Practical Assessment on Preparedness for Practice

MJ Platt
MJ Platt. Clinical Professor, Norwich Medical School, University of East Anglia, Norwich, NR4 7TJ

Background and Purpose
The phrase “assessment drives learning” is often quoted but there is relatively limited empirical evidence of this within medical education; Wormald et al demonstrated changes in students’ motivation towards learning anatomy when the subject was given greater weighting within assessments.¹

Data gathered from the GMC’s national training survey 2014 and presented in their report “The State of Education and Practice in the UK 2014”¹ demonstrated wide variation in foundation year doctors’ perceived preparedness practice by school of graduation. The percentage of respondents agreeing with the statement “the skills I learned at medical school set me up well for working as a foundation Doctor”, ranging from 62% to 97%, suggests that some medical schools are better than others in preparing their graduates for the workplace. This raises the question as to whether student’s perceived preparedness correlates with the emphasis placed by their medical school on clinical skills training, as measured by the weighting given to the assessment of practical skills.

Methodology
Drawing on data from Divine et al³, on assessment volume, type and intensity across UK medical schools, and from the GMC National Training Study², the relationship between assessment volume and type, and levels of perceived preparedness is explored.

Results
None of volume, type or intensity of assessment of assessment were associated with young doctors’ perceived ‘preparedness’. However those agreeing with the statement ‘The skills I learned at medical school set me up well for working as a foundation doctor were more likely to have attended a medical school where a greater proportion of assessment time was focused on practical skills, irrespective of the total volume of assessment (p<0.013)

Discussion and conclusion
This findings suggests that those schools with a greater emphasis on the assessment of practical skills are delivering students more confident and perhaps more proficient in the skills necessary for a foundation doctor. These findings add a further dimension to the discussion about the introduction of a British National Qualifying Examination.

References
Timed SCIMs improve student confidence, approach and performance in final clinical exams

A J Draycott, N J Downer, D S Kelsey, J E Patterson, H Boyce
A J Draycott. Medical Education Nurse (Medicine), Kings Mill Hospital, Sutton in Ashfield, Nottinghamshire, NG21 0FP

Background
In 2008 Nottingham Medical School identified that the student’s clinical examination skills needed improvement. They introduced mandatory assessments of core clinical skills (MACCS) and later changed their final assessment to include a long and a short OSCE.

To facilitate student learning in this area we at Kings Mill Hospital (a DGH and satellite unit for Nottingham medical students) developed Structured Clinical Investigation Modules (SCIMs). The focus of these sessions was to enhance the examination skills of medical students with the aid of patients demonstrating clinical signs. There are three SCIMs throughout the 8 week attachment. An initial practice SCIM concentrates purely on examination technique, a patient based SCIM follows concentrating on identifying clinical signs with the opportunity to discuss and revise their ability to elicit signs. Finally there is a timed SCIM that simulates the final assessment and is run in an OSCE format.

We found that these fitted into the Kolb’s experiential learning cycle of experience, reflection, conceptualisation and experimentation1.

Previous developments
These sessions enjoyed positive feedback from students with the timed SCIM getting particularly good reviews. OSCE 1 type had been introduced first and was soon to be followed by an OSCE 2 equivalent. We were still utilising patients, but with the addition of surrogates and skills stations to build a realistic exam experience. In 2011 the surgery attachment began delivering similar sessions so that we now have timed SCIMS in both OSCE formats delivered consistently across medicine and surgery. The feedback from these sessions has been consistently excellent with students finding the timed sessions in particular very useful, many have stated it improved their preparation for the final assessment. The team presented a poster to this effect at a local educational conference in July 2015 which was well received.

Methodology
Having already satisfied stage 1 of Kirkpatrick’s model2, this study aims to complete the remaining stages. This will be done by means of a questionnaire to the current FY1 doctors who undertook these sessions in 2014/5. There were 60 students in each of the specialties across the year. Amounting to a total of 120, these numbers may be reduced by factors out of our control such as overlap of specialty or movement out of region.

Outcome / discussion
The expected outcome of this study is to evidence that delivery of our real-time practice exam experience improves confidence levels, approach and performance in final exams for our students.

Why do students attend mock exams?

J Ehsanullah, E Southgate, S Singh
J Ehsanullah, Undergraduate Education Fellow, Undergraduate Department, Chelsea and Westminster Hospital, Imperial College, 369 Fulham Rd, London SW10 9NH, UK

Background and Purpose
Mock practical exams are extremely popular amongst students and have been shown to reduce anxiety associated with real examinations, and even affect performance in subsequent exams. However, with an increasing number of optional courses available to students, it is unclear as what motivates students to attend. This study aimed to examine what factors, other than those expected, motivate student attendance at a voluntary mock examination and what students perceive as the main benefits.

Methodology
Final year medical students were invited to attend a voluntary mock examination, involving real patients and junior doctors as examiners. The mock exam was provided to 48 students. A voluntary anonymous questionnaire was provided to all students after attendance. The questionnaire consisted of a mixture of Likert scale agreement questions and free text boxes for qualitative comment on the main benefits of the exam.

Results
47 responses were obtained. 98% of students felt that mocks are useful preparation for final examinations, with 91% reporting increased confidence.

98% of students felt that mock exams provided exposure to patients with signs that are difficult to find on the wards. 40% of students felt that mock exams allow them to spend less time in hospital ‘chasing signs’ and 27% students believed that mock exams could substitute for ward experience with regards to passing exams.

In the free text section asking the benefits of the mock exam, 68% of comments related to examining patients with real signs, and 53% of comments cited receiving feedback as a main benefit. Other perceived benefits of the mock exam were familiarisation with the exam routine, practise under exam conditions and encouragement from examiners.

Discussion and Conclusions
Our study re-iterates that the perceived benefits of mock exams include exposure to signs, improved confidence, feedback and familiarisation with the exam routine. However, one additional but key motivating factor to attend mock examinations is exposure to signs which students believe are difficult to find in hospitals, which was corroborated by both the Likert scale questions and free text sections of the questionnaire. Interestingly, a significant proportion of students indicated that they believe they can pass their exams by substituting authentic ward experience for attendance at mock exams. As it has been commented that “assessment drives learning”, the balance between the benefits of experiential learning and assessment provision requires further study.

3. Van der Vleuten, C.P.M. The assessment of professional competence: developments, research and practical implications. Advances in Health Sciences Education. 1 (1) 41-67
‘Step into theatre’: Evaluating medical student transition into the surgical environment

S Hall, N Botting, H Burton, J Fawcett, J Sansom
S Hall, South Bristol Academy, University of Bristol, Bristol, UK

Background
Transition into the clinical years of medical education can be challenging for students. Learners can find difficulty in applying their theoretical knowledge into real patient experiences and the increase in workload a considerable burden. An introductory theatre tour with basic surgical skills and knowledge is used with the aim to help bridge the transition gap for the junior surgical rotations. The study evaluated the impact of such a session upon year 3 medical students and whether student confidence is sustained.

Methods
Questionnaires were distributed to 28 year 3 medical students before and after the introductory theatre tour course at commencement of the surgical rotation. Domains covered included confidence being in theatre, theatre etiquette, the WHO checklist, basic suturing & knot tying, gloving & gowning, and awareness of maintaining a sterile field. Confidence was evaluated with a 5-point Likert scale and qualitative feedback gained. The same questionnaire was redistributed to the group at the end of their surgical rotation.

Results
A significant rise in confidence was elicited immediately after the theatre tour in all domains assessed. At 3 months follow-up, the students continued to show an improvement in confidence within all domains compared to before the theatre tour, however to a lesser degree of change. Confidence levels were comparatively lower for practical surgical skills and showed a lesser degree of sustainability. At follow-up, more students felt able to commit to an answer for whether they would or would not be interested in pursuing a career in surgery.

Discussion and Conclusions
By providing appropriately placed sessions within the surgical rotation, learner confidence within the theatre environment can be improved. Medical students however require further input to reinforce and maintain their confidence in practical skills. By nurturing opportunities for students to practise their skills and be introduced to the surgical environment in an accessible manner, we can aid them in making an informed decision with regards to a surgical career.

A mentor scheme for final year medical students

KA Else, J Barr, A Stanton, K Jones
KA Else, Swindon Academy, Great Western Hospital, Marlborough Road, Swindon, SN3 6BB

Background
The final year at medical school puts students under a unique combination of pressures. In 2013, a mentor scheme was set up for Bristol students that attend Swindon Academy. The student feedback on this initial programme indicated that the scheme improved their confidence, provided them with academic support and offered a sense of belonging. Equally, the mentors valued practicing their teaching skills. The original study used the feedback to make suggestions for improving the scheme. This included the incorporation of an introductory lecture and offering ‘reserve’ mentors to allow for mentor absences. We implemented these improvements and evaluated the response.

Methods
Junior doctors were asked to volunteer to become mentors for the final year medical students during their 3 month pre-finals placement. Thirty eight junior doctors signed up to participate in this scheme. They were given information about their role, a mentor handbook and the opportunity to attend train-the-mentor’s events. All 34 final year medical students signed up to the scheme and were then paired with two junior doctors within the hospital. The students and doctors met at a “meet and greet” event where they were encouraged to discuss their aims and agree initial meetings.
Data was collected at the end of the placement from the students using a questionnaire. Questions were asked using a five-point Likert-type, unipolar response scale evaluating confidence, academic and pastoral support, perceived stress levels and students’ sense of belonging. Qualitative data was collected using free text boxes within the questionnaire and also within a focus group session, which we hope to analyse with thematic content analysis. A questionnaire using the same quantitative and qualitative methods has been circulated electronically to mentors.

Results
The student feedback was positive. They agreed that their mentors had increased their confidence, provided valuable academic and pastoral support, reduced their stress levels and provided students with a sense of belonging. Despite each student having two mentors, the focus group identified that there were still barriers to spending time with their mentors and that the provision of two mentors had not fully overcome the previous issues of mentor absences. We are currently collecting mentor feedback. We will then compare all data to the data from the 2013 scheme.

Conclusions
The mentor program was a useful and positive experience for students and we will continue to offer this opportunity to doctors at Swindon hospital.

References
A multi-centre survey exploring medical students’ experiences of extra-curricular academic research

TM Rawson, R Lobo, A Rossiter, P Sivakumaran, G Mahir, D Gill
TM Rawson Imperial College London, Hammersmith Hospital Campus, Acton, London, W12 0NN.
Email: tmr07@ic.ac.uk

Background
In the UK, the General Medical Council expect all qualified doctors to have an understanding of research and evidence which informs medical practice, regardless of whether they wish to pursue a career in academia¹. To develop the necessary skills, participation in undergraduate research may therefore be beneficial for medical students. A willingness to engage in undergraduate research has been demonstrated in the US. For example, at Stanford University, 90% of undergraduate students were actively involved in research with 75% publishing their research². In the UK there is little evidence exploring undergraduate experiences of research. We performed a multi-centre survey to explore undergraduate experiences of extra-curricular academic projects at two leading academic centres in the South of England, UK.

Methods
A web based survey was developed based on a review of the literature³. A mix of five point Likert scales, ranking, and free text box questions were incorporated into the questionnaire. The survey was circulated to all clinical students at the University of Oxford and Imperial College London (UK) using their student newsletters. Participants sharing their contact details were entered into a prize draw (£25 cash prize). Data analysis was performed using Microsoft Excel 2007 with thematic analysis performed on free text answers.

Results
In total, 51 students responded to the survey. Of these, 46 (90%) reported that they were interested in carrying out research. However, only 40 (78%) had approached potential supervisors. Fourteen (27%) attribute this to a lack of motivation, with 31 (61%) reporting a lack of interest from potential supervisors and 36 (71%) describing time pressures of university as a major factor.

Thirty-three (65%) participants reported that using a 'centralized website' which could match students with supervisors for academic projects would be the most convenient method of promoting engagement in undergraduate research. All 51 respondents (100%) responded that they would use a website advertising available academic projects. The role of approaching participants own personal contacts (30 agreed, 59%) and opportunistically taking part in projects (38 agreed, 75%) were also reported as approaches to engaging in academic projects that participants currently consider.

Conclusion
This work supports previously observed barriers to undergraduate involvement in research³-⁵. Moreover we have identified that participants would prefer a centralised web based system to facilitate engagement with undergraduate research and potentially overcome reported barriers entering research. Further work is required to investigate whether this approach would overcome the barriers described in practice.

References
A novel interactive game for effective undergraduate teaching of medical abbreviations.

F Rashed, C J Barr
F Rashed, Medical Student, Gloucestershire Academy of the University of Bristol Medical School, Redwood Education Centre, Gloucestershire Royal Hospital, Great Western Road, Gloucester, GL1 3NN

Background
Medical records are a key part of any healthcare system. Increasingly, medical abbreviations are used in patient notes. Worryingly, recent research suggests that correct identification of such abbreviations is as low as 43%\textsuperscript{[1]}. As such, educating medical students regarding commonly used abbreviations will help improve patient care. Delivering this information can be in the form of traditionally used lecture based approaches, however, the recent increase in the use of interactive learning techniques could prove to be a more effective tool in aiding learning. We hypothesize that an interactive bingo game can be as effective as a didactic teaching method in assisting students to learn commonly used medical abbreviations.

Methods
A list of commonly used or often confused abbreviations was created using feedback from current clinical students at Bristol University Medical School. Bingo game cards were created using this list of medical abbreviations. Students were divided into two groups. One group (lecture group) was given a didactic lecture. The other (bingo group) was given the bingo game. Both groups received a pre and post teaching intervention quiz. All students then received the alternative method of teaching. Feedback was collected from students regarding aspects such as enjoyment of the sessions and how well the session prepared them for clinical placements. Statistical analysis of quiz scores was conducted using SPSS.

Results
Post-teaching scores increased significantly in both groups. The mean quiz score improved by 3.052 in the bingo group (95%CI 1.666 to 4.439 p<0.001) and by 4.125 in the lecture group (95%CI 3.381 to 4.869 p<0.001). There was no significant difference between the two groups in mean post-teaching scores (p=0.101). Students enjoyed the bingo game more than the lecture. All the participants agreed or strongly agreed that the teaching session prepared them for clinical practice.

Discussion and Conclusion
Teaching medical abbreviations both via lecture and bingo game improved knowledge of commonly used abbreviations. There was no significant difference in teaching methods in mean score improvements showing bingo to be as effective as the lecture. Feedback received highlighted most students felt receiving a lecture followed by the interactive game was optimal as they felt the lecture was good for learning and the bingo good for cementing that knowledge. We suggest that the abbreviation bingo game is a robust way of effectively teaching medical abbreviations and could be used elsewhere as a cheap and easy to implement teaching intervention.

References
A Prospective Study comparing teaching of pelvic examination by Clinical Teaching Associates (CTA) with Traditional Methods and a survey of CTA use in UK medical schools.

J Moffatt, S Canning, H Claireaux, K Jones
J Moffatt (joanne.moffatt@gwh.nhs.uk) – Clinical Teaching Fellow, Undergraduate Academy, Great Western Hospital, Marlborough Road, Swindon, SN3 6BB

Background
The Royal College of Obstetricians and Gynaecologists emphasise the importance of teaching a pelvic examination as part of the undergraduate curriculum\(^1\). Clinical teaching associates (CTAs) are laywomen trained to teach gynaecological consultation skills and pelvic examinations\(^2\). Swindon Academy has run a CTA programme for undergraduates since 2011 and consistently reports favourable outcomes in comparison with traditional teaching. Worldwide CTAs are used to teach pelvic, rectal, breast and testicular examinations with the UK having significantly lower levels of use compared to the US and Australia\(^3\). To our knowledge no published record exists of which UK medical schools use CTA teaching. We were keen to establish the extent of CTA use and which examinations they teach.

Methods
The participants who have attended CTA training in Swindon to date have provided qualitative and quantitative feedback comparing CTA training with traditional teaching (use of plastic manikins). They were asked to rate their confidence in various aspects of the examination out of 10. To identify use of CTA teaching in UK medical schools a survey was sent out. The survey aims to establish how each institution teaches intimate examinations in addition to attitudes towards the method.

Results
Our results to date show that CTA training is superior to traditional teaching with the confidence in performing a speculum examination 4.90 prior to CTA teaching and 9.35 afterwards (p <0.01) and performing a bimanual 4.49 before and 9.41 after (p <0.01). Examples of the largely positive qualitative feedback received were; ‘incredible learning experience’, extremely useful’ and ‘approachable teachers’. 38 medical schools were contacted and responses received from 27. 55% UK medical schools that responded to our survey have some CTA use in their undergraduate teaching. Qualitative data collected suggested that funding and recruitment difficulties are the main barriers to wider use.

Conclusion
This on-going study supports existing data demonstrating that CTA teaching is superior to traditional methods for learning pelvic examinations. We also hope to report on the progress of our breast-training programme with preliminary results hoped to be available.

References
An educational initiative to improve medical student communication skills: the IMPArT method (IMmediate Personalised feedback with peer-Assessment)

D Holmes, M Hunter, J McGoran
D Holmes, F1 Doctor, Antrim Area Hospital, 45 Bush Rd, Antrim BT41 2RL

Background and Purpose
Proficient communication skills are essential in providing high quality patient consultations. Nevertheless medical students score lower in communication stations than in those assessing practical skills.¹ This may be because the latter lend themselves more readily to a rehearsed approach while feedback on clinical placements frequently focuses on clinical examination. However, educational initiatives delivering personalised feedback improve communication skills while peer-assessment has emerged as a sustainable method of providing reliable feedback.² ³ As the majority of OSCE preparation often takes the form of student-led groups outside of the university curriculum it is important that students become confident in peer-assessment and offering constructive feedback.

Methodology
Twelve year 4 students at Queen’s University Belfast were invited to take part in two high-fidelity, formative OSCE sessions. Qualified doctors acted as examiners. The standard OSCE format was supplemented by the introduction of a dual initiative combining peer-assessment and a 2 minute protected-time feedback window (IMPArT method). Student and examiner experiences were evaluated by questionnaires.

Results
All students agreed that the sessions improved their performance in the subsequent OSCE. Mean values of self-rated confidence and communication skills increased from 4.3 to 7.5 and 5.4 to 7.2 respectively. 90% of students agreed immediate, personalised feedback was a useful addition. Common themes were that this approach facilitated reflection while examiners welcomed the opportunity to deliver specific feedback to individual students in an interactive setting. All students agreed that peer-assessment was a useful addition while 90% felt this improved subsequent student-led study groups. 100% of students felt their ability to accurately assess their colleagues’ performance improved following this session

Discussion and Conclusions
Formative OSCEs employing the IMPArT method improved student self-rated confidence and communication skills and were well-received by both students and examiners. This may improve the effectiveness of current OSCE revision sessions focusing on communication skills and add structure to student-led study groups.

References
Author your own OSCE – a novel approach to remedial support.

P Watson, K Cullen
Peter Watson, Clinical Senior Lecturer, Centre of Medical Education, School of Medicine, Queen’s University Belfast, BT12 6JD

Background and Purpose
In 2015, 14 out of 250 final year students failed the final OSCE exam. These students had already passed the written component of the final examination, demonstrating that their factual knowledge was satisfactory. Feedback from examiners and the students themselves, however, suggested that they had difficulties with the OSCE format. As part of our remedial programme we introduced an OSCE workshop during which the students wrote and rehearsed their own OSCE’s. The aim was to deepen their understanding of the structure of OSCE’s and thereby improve their performance.

Methodology
All remedial students were invited to the workshop, which lasted 3 ½ hours. 12 students attended. In the first part of the workshop we discussed suitable topics for OSCE stations, how the marking system is constructed using a template and how scores are weighted. For example, there was a detailed discussion of a recent OSCE about a patient with small bowel obstruction. After coffee, in the second part of the workshop they were divided into groups and asked to devise and enact their own OSCE’s using a blank OSCE template. The topics chosen by the students were history taking from a patient with congestive heart failure, management of hyperkalaemia and management of sepsis. The students provided written feedback by questionnaire after the workshop.

Results
Eight students felt that it was a useful approach and recommended it for future use, 3 did not answer these questions and 1 thought it was not useful. Several commented about gaining “insight” into the mark scheme, which they thought helpful. Several commented on the benefits of peer group interaction and the opportunity to ask questions about the exam. However 3 students commented that they would prefer to do a ‘mock OSCE’ in real time. Mock OSCE sessions were scheduled for the following week.

Discussion and Conclusions
This pilot project to help familiarise remedial students with OSCE’s was considered helpful by most students who took part. The OSCE workshop was part of a remedial programme including a mock OSCE exam and was placed at the end of the student assistantship. All students went on to pass the re-sit exam. Further research is required to assess the contribution made by this type of workshop and other learning opportunities during the remedial period.
Developing the Leicester LINK Initiative: Helping the Next Generation of Medical Researchers Learn Academic and Research Skills

G Yan, S Venturini, B Sheth, A Riding
G Yan, Leicester Medical School, University of Leicester, University Road, Leicester LE1 7RH

Background and Purpose
The Leicester LINK initiative is a novel scheme, run by medical students for medical students, to encourage participation in medical research during medical school. Aside from the option of an intercalated BSc, the curriculum offers very few opportunities for students to develop academic research skills or get involved in projects. Students have reported feeling discouraged from getting involved in research because they feel they do not possess the necessary skills or do not know whom to contact.

The LINK Initiative co-ordinates a partnership between medical students and Leicester-based researchers by providing a system that allows students to get involved in research projects in their own time, alongside their core medical studies.

Methods
Academics from the University of Leicester (UoL) and clinical researchers from the UoL Trust are invited to offer projects in their field. All medical students are then invited to apply for their top 3 choices. The supervisor will then decide the successful applicant/s. Formal feedback is collected during and after the projects, with suggestions to improve the scheme implemented in the next project cycle. As well as facilitating easier access to research projects, we also organised a mini conference. We invited all LINK students to present their work in oral and/or poster format, regardless of what stage they were at with their LINK projects. Students had the opportunity to develop their presentation skills and receive constructive feedback and invaluable insight from 2 UoL academic judges as well as their peers. The conference also included an interactive workshop, which gave guidance on writing for abstract submission and publication.

Results
Since December 2012, we have offered in total 64 projects via five application rounds, and have received 145 applications from students in total, with the competition ratio increasing each round. Feedback from the first four rounds has been overall positive from both supervisors and students. We also expanded the scheme to support students during and after their project. The conference was a useful stepping stone for students to gain experience presenting their work. We are proud that LINK students have presented their work at national and international conferences, and some are in the process of writing for publication.

Conclusion
The LINK Initiative has grown into a strong collaboration between students and academics. This scheme has been expanded into other medical schools. Plans for a sixth project cycle are already underway.
Do final year undergraduate medical students complete pre-reading for tutorials?

A Tomsett, R Gayner, N Adams, E King, R Adhikary, D Mann and N Jakeman
A Tomsett, Clinical Teaching Fellow, Bath Academy, Royal United Hospital NHS Foundation Trust, Combe Park, Bath, BA1 3NG

Background and purpose
Reading prior to a teaching session improves foundation knowledge and enhances learning. However, studies have shown that only 20-30% of students complete the advised pre-course reading. The University of Bristol have devised a series of ten small-group prescribing tutorials for final year medical students. There is a case-based prescribing task to be completed in advance; the case and correct prescriptions are then discussed during the tutorial. We sought to identify compliance of students with the pre-tutorial tasks and potential barriers preventing these from being completed.

Methodology
We devised an anonymous questionnaire to identify how many final year students from the University of Bristol at Bath Academy were aware of the prescribing task and how often they completed it. If the task was not completed respondents were asked for free-text comments explaining reasons why and these were then reviewed using thematic analysis.

Results
The response rate for questionnaires was 83%. All students were aware that there was a prescribing task to be completed before each of the ten tutorials. 40% of students completed less than five tasks, 50% completed five to ten tasks and 10% completed all ten tasks. When asked why tasks were not completed prior to the tutorial, common themes included: lack of time, forgetting, other time pressures and not having the worksheet.

Discussions and conclusions
Compliance with completing the prescribing tasks in our study reinforced findings from the literature. Lack of time and pressure to complete other tasks were the most significant reasons why the tasks were not completed. A review of the curriculum and the volume of work expected to be completed by medical students is required to identify educational priorities and formulate student-centred and faculty-centred approaches to improve in this area.

References
2 Hobson EH. Getting Students to Read: Fourteen tips. The Excellence in Teaching Center, Georgia Southern University: IDEA PAPER #40; 2004.
Do Multidisciplinary Human Factors and Incident Investigation Workshops Improve Attitudes and Understanding towards Patient Safety and Communication amongst Undergraduates?

DN Majumdar, Assoc. Clinical Teaching Fellow, Undergraduate Academy, Great Western Hospital, Swindon SN3 7BB

Background and Purpose
Approximately 900,000 adverse events occur in the NHS yearly at a cost of £1-2 billion p/a.\(^1,2\) The core to Human Factors training has remained the skills of dynamic decision-making, leadership and interpersonal relationships within a multi-disciplinary team.\(^3\) Many doctors admit to have never completed an incident report, despite emphasis on the importance of quality and safety systems within Good Medical Practice.\(^4\) The cause of this is clearly multifactorial, but a lack of understanding of these processes may play a part. Medical and Nursing students are the future innovators and leaders of our health service and the importance of patient safety principles has never been more paramount. In 2011 the WHO produced a framework to educate students.\(^5\) Team-training can positively impact healthcare team processes and patient outcomes, and simulation is an effective tool to modify safety attitudes and teamwork behaviour.\(^6,7,8\) We hypothesise that a Multidisciplinary Human Factors and Incident Investigation Workshop incorporating active learning and simulation can improve attitudes and understanding towards patient safety and communication behaviours amongst undergraduates.

Methodology
We designed a 2-day course for medical and nursing undergraduates that will take place in March 2016. They will incorporate workshops and multi-disciplinary simulation. Students’ attitudes towards patient safety will be assessed using the H-PEPSS questionnaire, course feedback (using Linkert scales) and performance during simulation.\(^9\) The questionnaire will be administered pre-course for the first course and post-course for the second course.

Results
Data will be summarised using descriptive statistics and ANOVA.

Conclusions
The course will be evaluated with the results from the questionnaire and student feedback, with a view to making the multi-disciplinary, student patient safety workshop an integral part of the curriculum and to develop stronger links with the nursing school.

References
Do third year undergraduate medical students complete pre-reading prior to tutorials?

R Gayner, A Tomsett, E King, N Adams, D Mann, R Adhikary and N Jakeman
R Gayner, Clinical Teaching Fellow, Bath Academy, Royal United Hospital NHS Foundation Trust, Combe Park, Bath, BA1 3NG

Background and purpose
Reading prior to a teaching session improves foundation knowledge and enhances learning. However, studies have shown that only 20-30% of students complete the advised pre-course reading. The University of Bristol have devised a series of ten small-group case-based tutorials for third year medical students covering medical and surgical topics. They are asked to complete either a short web-based tutorial or read material pertinent to the tutorial on the university online learning management system. We sought to identify compliance of students with the pre-tutorial reading and potential barriers preventing these from being completed.

Methodology
We devised an anonymous questionnaire to identify how many third year students from the University of Bristol at Bath Academy were aware of the pre-tutorial reading and how often they completed it. If the task was not completed respondents were asked for free-text comments explaining reasons why and these were then reviewed using thematic analysis.

Results
Results and themes will be presented.

Discussions and conclusions
Discussion of the results and recommendations for future practice will be presented.

References
2 Hobson EH. Getting Students to Read: Fourteen tips. The Excellence in Teaching Center, Georgia Southern University: IDEA PAPER #40; 2004.
Does blended learning improve students’ ability to engage with old age psychiatry topics?

J Mjojo, T McGowan, A Blundell, B Ganesan, G Pinner
J Mjojo, Nottingham University Hospitals NHS Trust

Background
The Health Care of the Elderly (HCE) module for 4th year medical students at the University of Nottingham integrates teaching in geriatric medicine and old age psychiatry, a unique feature. Students are taught conditions that are common mental health issues in older people including Delirium, Dementia and Depression. Prior to 2015, topics had been taught through didactic lecturing. Although this allows the teacher to ensure wide coverage of the curriculum, it remains teacher centered¹,². In recent years, key geriatric medicine topic teaching (falls and continence) have been developed to involve a more novel, interactive, student centred delivery which received improved feedback. In response to feedback from students, an interactive session called “the 3Ds” was introduced for mental health issues.

Aim
To assess the impact of this new teaching method by evaluating the student’s feedback compared with the previous method.

Method
Initially the common conditions (Delirium, Dementia and Depression) were each assigned 45 minutes of didactic teaching. Feedback was collected from 252 students during period 2013-2014. For the 3Ds session, students were allocated time to complete computer aided learning (CAL) packages³,⁴ on each of the topics in advance of a teaching session. This teaching session involved students completing an interactive workbook during buzz groups, and general discussions. Student feedback was collected from 176 students who had participated in the sessions. For both sessions a 5 point LIKERT scale was used to provide feedback and constructive comments were encouraged.

Results
Student feedback from the didactic teaching was analysed. 25% of students rated didactic teaching as satisfactory, 29% very good and 17.5% excellent. The general student feedback comments were that although the topics were appropriate, the sessions were dry, boring, uninteresting, un-engaging with very little opportunity to stimulate learning. Most students suggested a change to an interactive method of teaching. Following the introduction of the 3 Ds session, 23.3% rated the interactive session as satisfactory, 53% as very good and 29% as excellent.

Discussion
Although the sample size used to compare the two is different, this indicates an improvement in student satisfaction with the new interactive method. Student feedback has improved with students valuing the opportunity to contribute during the session. Some students suggested using smaller groups to maximize engagement. We suggest using similar interactive sessions to involve student learning of difficult topics.

References
3. http://www.nottingham.ac.uk/toolkits/play_8664
4. http://www.nottingham.ac.uk/toolkits/play_8771
Domestic Violence – The Case For Incorporating Teaching into the National Obstetrics and Gynaecology Curriculum

J Moffatt, K Else, C Cox-George, K Jones
J Moffatt (joanne.moffatt@gwh.nhs.uk) – Clinical Teaching Fellow, Undergraduate Academy, Great Western Hospital, Marlborough Road, Swindon, SN3 6BB

Background
The Department of Health estimate that women experience thirty-five episodes of domestic violence (DV) before seeking help.¹ Victims of DV may present via various specialities; emergency departments, general practice, psychiatry or obstetrics and gynaecology but 85% of victims see on average five professionals before they receive effective support.² It is recognised that women experiencing domestic abuse are at higher risk of abuse during pregnancy and consequently adverse pregnancy outcomes³. Such statistics emphasise the importance of awareness and understanding of management of these cases. Education on DV is not routinely offered in the medical undergraduate curriculum and is only superficially referred to in the UK Foundation Programme curriculum⁴. A potential solution would be the use of a simulated teaching sessions aimed to equip medical students with the confidence and knowledge necessary for approaching individuals affected by DV.

Methods
We have designed a simulation session on DV in conjunction with Women’s Aid which will be run for undergraduate students as part of their Obstetrics and Gynaecology attachment. Before the session students will complete an anonymous questionnaire. They will be asked to rate their knowledge and level of confidence in dealing with DV using a 5 point Likert scale. Following the simulation session students will be asked again to rate their knowledge and confidence and we will directly compare the results.

Results
Two cohorts of students (n=16) will participate in this pilot study between March and May 2016. The data collected from the completed questionnaires prior to and after the teaching session will be analysed using a paired T test or Mann-Whitney U test depending on distribution of data.

Discussion
Simulation is increasingly a mainstay of medical education. Raising awareness of DV among healthcare professionals is our aim and we hope that a successful trial of this teaching session may lead to ongoing use in undergraduate and postgraduate training. The long-term goal would be for simulation teaching to be embraced by all professionals involved in the multi-disciplinary management of DV in the health and social care setting.

References
Educating the educators of the future – Analysis of a 10 week medical student selected module.

M Newman, K Bennett, J Morgan
M Newman, Cherrytrees, Ullenhall, Henley-In-Arden, B95 5PY

Background/Purpose
Doctors have a duty to teach and there are many benefits from having medical students as teachers. Medical students however receive little training in how to educate with many feel unprepared upon graduation. To address this, a 10 week course for third year medical students at Warwick Medical School was set up to promote interest and facilitate learning in this fundamental aspect of medicine. Success of the course will be determined by analysing student’s perceived confidence in their ability to teach medicine.

Methodology
Thirty third year medical students volunteered for the course. Using a questionnaire composed of Likert style statements (1-10) we judged the participants perception of their preparedness to teach medicine, their confidence in their own abilities and their likelihood of becoming teachers themselves. Students then undertook a 10 week course entitled “Optional certificate in medical education”, comprising of tutorials based on topics doctors may be required to teach e.g. bedside teaching, small group tutorials. We plan to undertake a further post course questionnaire to discern the effect of this intervention.

Results
Preliminary results are available. 26 of the 30 participants completed the pre course questionnaires. 80% agreed they enjoyed teaching. 21/26 planned to make teaching medicine a large part of their career. Nearly all participants (25/26) recognised the importance of doctors being good teachers. However participant’s confidence in their abilities scored a mean of 5.5 /10 and when asked if participants felt they had been provided with substantial training to be a good teacher, the mean was 4.7/10. Upon completion of the course, we will analyse the significance of confidence changes by repeating the questionnaire.

Discussion
Third year medical students show a great passion for teaching and recognise the importance of doctors being good teachers. Many feel that they lack confidence in their abilities to teach, and feel unprepared to take on this role. Upon course completion, we will be able to evaluate whether implementing a 10 week “teaching how to teach” course is an effective way to improve student’s confidence and self-perception of their abilities. A Potential drawback is our study is biased by students interested in teaching. This could be amended by extending the questionnaire to all students.

Conclusions
There is much enthusiasm for medical students to incorporate teaching into their career; however they feel ill equipped by their medical school for this role and thus lack confidence in their ability.

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Education or intimidation? The learning experience in Obstetrics and Gynaecology operating theatres.

N M Haughey, J Costa
NM Haughey, Centre for Medical Education, Queen’s University Belfast, Whilta Medical Building, 97 Lisburn Road, Belfast, N. Ireland, BT9 7LB

Background and Purpose
The theatre environment is potentially an excellent teaching resource although it can be an intimidating and a challenging place to learn. Many students feel poorly prepared for learning in theatre and perhaps unsure of the learning objectives of this type of teaching. Apprehension, anxiety and fear of being overwhelmed have been identified as the primary emotions and vicariously prove to be barriers to learning in the operating theatre. Among surgical subspecialties, at both undergraduate and postgraduate level, teaching and training within the operating theatre has increasingly become a focus of interest. There has been little study however within the specialty of Obstetrics and Gynaecology with regard to students’ learning experiences in operating theatres. It is critical to ensure that operating theatre based teaching provides a positive and motivating learning experience. This prospective mixed method study is designed to evaluate the medical students’ learning experiences in the theatre environment during their Year 4 obstetrics and gynaecology attachment.

Methodology
This study utilises paper based questionnaires and a focus group to explore the students’ experiences of learning in the operating theatre environment during their year 4 Obstetrics and Gynaecology attachments. The year 4 students undertaking their attachment between Jan – May 2016 (approx. 120) will be invited to partake in the project. The first questionnaire is delivered prior to their attachment and explores career aspirations, previous surgical experience, learning objectives, expectations and concerns regarding their learning in the operating theatre. The second questionnaire will be completed after their attachment and reviews the opportunities students were afforded to scrub and assist in theatre along with any procedures they performed. The students will evaluate the learning experience and teaching received on a Likert scale and will be asked to describe the positive and negative factors influencing the experience. A focus group will be conducted at the end of the academic year to further explore the educational experience in the theatre environment. A thematic analysis will be performed on the audio transcript from the focus group.

Results
The data collection for this paper will take place in the next semester.

Discussion and Conclusions
It is anticipated that the results will be of value to the staff responsible for the delivery of Phase 4 obstetrics and gynaecology curriculum to ascertain if the learning objectives were met and if there would be any opportunity for interventions to improve students’ learning experience in the theatre environment.

References
2. Lyon P.M. Making the most of learning in the operating theatre: student strategies and curricular initiatives (2003) Medical Education 37:680-688
3. Fernando N. et al How can we prepare medical students for theatre-based learning (2007) Medical Education 41:968-974
Effects of formal teaching compared with self-directed learning on student ultrasonography skills: randomised controlled trial

Thorley R, Ball S, Pearce K, Wong JS, Iles S
Thorley R, Torbay and South Devon NHS Foundation Trust, Torbay Hospital, Torquay, TQ2 7AA

Background and purpose
The Royal College of Radiologists has acknowledged that ultrasound skills have become a necessary part of non-radiology postgraduate training.[1] These skills may improve the safety of procedures that graduates learn to perform in their foundation years. Ultrasound is increasingly used to teach anatomy and clinical examination in undergraduate medical education, however students do not often have opportunities to use ultrasound in a clinical context on real-life patients.[2,3] We sought to compare a six week programme of expert teacher led small group sessions and self-directed learning, with self-directed learning alone on final year medical students’ performance in a new structured clinical assessment of ultrasound skill.

Methodology
We conducted a randomised controlled trial. 12 final year medical students from Peninsula College of Medicine & Dentistry, Truro were recruited. Six students were randomised to 10 hours of expert teacher led sessions with self-directed learning over six weeks, and six were randomised to self-directed learning alone over that time. The main outcome measure was between-group differences in scores using a new structured clinical assessment of ultrasound skills.

Results
Those students who received expert teaching performed better on average than those in the self-directed learning group. The median total basic score was 13.5 (out of 16) in the intervention group, compared to 8.75 in the self-directed learning alone group (P=0.005, Mann Whitney U test); median total plus bonus score was 15.25 (out of 20) in the intervention group, compared to 9.5 in self-directed learning alone group (P=0.005, Mann Whitney U test).

Discussion and Conclusion
The study is limited by small sample size. It was not possible to further investigate possible differences between groups for individual ultrasound skills as the range of possible scores in the assessment was small. The time given to students to practice their ultrasonographic skills was only six weeks. Despite the limitations of this study, we have shown that a programme of expert teaching on ultrasound is feasible, and is of benefit in terms of effect on ultrasound skills compared to self-directed learning alone. We recommend further studies with more participants, together with a validation of the assessment we used. The use of ultrasound is increasing in clinical practice, particularly by the bedside. Therefore we feel it should be introduced as a new clinical skill for medical students to learn.

References
Evaluation of the effect of a ‘Peer Assisted Learning’ tutor training workshop and practical teaching experience on student tutor confidence in teaching ability

A Samuels, P Davies
A Samuels, Clinical Lecturer, Gloucestershire Academy, Gloucester, GL13NN

Background and purpose
The GMC has highlighted the need for medical graduates to function effectively as a mentor and teacher as well as a doctor\(^1\). The majority of UK medical schools offer some form of teaching skills training, with variations in student selection, course content and structure, and evaluation\(^2\). At the University of Bristol, final year students participate in a compulsory Peer Assisted Learning (PAL) tutoring scheme. Students attend a half day “Training the Trainers” workshop. The students then plan and teach a small group session for 3\(^{rd}\) Year students, with peer and supervisor observation and feedback. Finally they submit a reflective report on the process. Few UK medical schools include peer teaching in a compulsory module\(^2\). We are evaluating the educational benefits of the scheme.

Preliminary results of the evaluation of the PAL course delivered at Gloucestershire Academy are available, focussing on effect of the workshop and practical teaching experience on the development of student tutor confidence in teaching skills.

Methodology
44 final year students participated in the 2015 cohort as student tutors. Students were asked to rate confidence in their teaching ability on a 5 point Likert scale (1=Low to 5=High) immediately before and after the “Training the Trainers” workshop, and again after their teaching session and reflection were completed.

Results
Pre-workshop, 51.2% students rated confidence in their teaching ability at 4 or 5 on the 5 point Likert scale. This increased to 76.3% immediately after the workshop and to 92.6% after teaching and reflecting on the small group teaching session.

Discussion
Participation in the workshop increased student teaching confidence, which increased further after students had engaged in the practical teaching exercise and subsequent reflection. It has previously been suggested that experiential learning may be a key feature contributing to the success of programs designed to improve teaching effectiveness\(^3\). Our preliminary findings support this, suggesting that training on education needs to include focus on the experiential learning cycle, allowing the application and consolidation of knowledge.

The evaluation of the course is ongoing and we will present results from this year’s cohort (2016) to include data relating to global confidence in teaching ability at each time point, as well as specific aspects of teaching ability: setting objectives; selecting appropriate teaching methods, giving feedback and evaluating teaching effectiveness.

References
Evaluation of the impact of a novel Peer Assisted Learning (PAL) Programme on medical student education and exam preparation

R Kehoe, M Hegarty, N Gildernew
R Kehoe, CMDET, Western Trust, Glenshane Road, Derry City, NI

Introduction
Within our education centre with excess of 300 students/ year, the majority of undergraduate teaching is delivered by postgraduate staff. With increasing evidence base and momentum for peer assisted learning a pilot project was created.

Aim
To create, deliver and assess the impact of a PAL programme within the education centre.

Method
Six final year medical students, during their FY0 assistanceship, were informed and volunteered for the PAL programme. With senior medical supervision, a questionnaire was produced to identify areas that third year students would like their PAL teaching to focus on. A twice weekly timetable of both theory and clinical sessions delivered by the final year ran for five weeks with a mock OSCE designed and delivered, with feedback, on the final week.

Results
Results showed the hugely positive impact of this intervention: students felt it was directed at their level and they had initial input into desired topics thus positively impacted on their knowledge and skills; The environment was supportive, non-threatening and ideal for learning: The mock OSCE a positive and helpful experience and revealed that those with intensive peer support on the PAL programme outperformed other students without this support.

Discussion
This programme was the first of its kind in NI: with benefits to both third and final year students. Locally in Western Trust we are running the same programme this year and are creating an extra PAL programme between postgraduate and undergraduate interfaces. Five additional medical clinical teaching fellows are recruited to support this growth. If we can create competent and effective doctors with great knowledge, skills and confidence, we can influence and deliver great healthcare.
Exploring medical student learning in the large group teaching environment: Examining current practise to inform curricular development

C Luscombe, J Montgomery
C Luscombe, 4th Year Medical Student (MSc Medical Education), Brighton & Sussex Medical School, Brighton, United Kingdom.

Background

Lectures continue to be an efficient and standardised way to deliver information to large groups of students. It has been documented that students prefer interactive lectures, based on active learning principles, to didactic teaching in the large group setting. Despite consistent feedback from students that lectures incorporating active learning techniques are preferable to didactic sessions, we have noted in practice, it is challenging to engage students with active learning tasks. This challenge for educators is also documented within medical education literature.(1,2) By exploring student experiences, expectations and how they use lectures in their learning we will provide recommendations for faculty to support student learning both in the lecture theatre and during personal study time.

Methods

This research employed a hermeneutic phenomenological approach. Three focus groups were used to explore the experiences of second year medical students in large group teaching sessions. Using generic thematic data analysis, these accounts have been developed into a meaningful account of experience. This information may be transferrable to other modules within the institutions curriculum, and more widely nationally.

Results

This study found there to be a well-established learning culture amongst students and with it expectations as to the format of teaching sessions. Furthermore, there were set perceptions about the student role within the learning environment and with it many implications, including the way that innovative teaching methods (e.g. the flipped classroom and audience response systems) were received. Student learning was perceived to take place outside the lecture theatre, with a large emphasis placed on creating resources that can be taken away to use in personal study time.

Conclusions

Presented here is a constructive review of reasons for student participation, interaction and engagement in large group teaching sessions. Based on this are recommendations, constructed with the view to aid educators in engaging students in large group teaching settings. The established learning culture of the students has extensive impacts on their perceptions and approach to learning. Short term, educators can implement strategies that monopolise on the established learning culture of students, to encourage engagement with active learning strategies. Long term, it would be beneficial for educators to consider ways to shift the current student learning culture to one that embraces an active learning curriculum.

References

Exploring the impact of a unique Wilderness and Expedition Medicine course on undergraduate leadership, teamwork, situational awareness and problem solving

J McDonald, M Harris, A Radford, T Godfrey, S MacDougall-Davis, S Wysling, K Jones
J McDonald, Swindon Academy, Great Western Hospital, Marlborough Road, Swindon, SN3 6BB

Background
University of Bristol (UoB) students undertake student selected components (SSCs), fulfilling the GMC requirement to provide medical students with a degree of autonomy over their curriculum\(^1\). Within the Swindon academy a unique SSC in Wilderness and Expedition medicine is offered to 3\(^{\text{rd}}\) and 4\(^{\text{th}}\) year undergraduate students, providing them with experience of care provision in a remote setting. The course is now in its third year. Data collected from previous years has demonstrated a statistically significant increase in participants’ confidence when managing emergency situations in the wilderness environment. The GMC guidelines on Good Medical Practice identify ‘leadership’, ‘teamwork’, ‘situational awareness’ and ‘problem solving’ as key skills required by a clinician throughout their career\(^2\). We feel that experiential learning in the wilderness environment will promote the development of these skills, which will in turn positively impact on medical practice. This year’s project aims to appraise the value of the course in promoting the key skills outlined above whilst simultaneously building on the data collected in previous years.

Methods
Sixty students have been selected to undertake the 2016 course. These will be divided into cohorts of twenty. Each cohort will undergo a week of simulation training at the UoB Academy in Swindon, followed by a 6-day Wilderness and Expedition medicine course in the French Alps. It will be delivered through lectures, small group teaching and simulation scenarios. Students will also be able to participate in clinical work in acute specialities within the Great Western Hospital. This will include the option to shadow paramedics. They will then complete a written report relevant to the field of expedition medicine to consolidate their learning. Quantitative feedback will be collected from the students using semantic differential scales and analysed using descriptive statistical analysis. Qualitative feedback will be collated using free-text boxes with consequent thematic content analysis. In addition to the methods of appraisal used previously, this year the students will also be required to rate the benefits of the course in regards to the 4 key skills described above.

Results
We intend to collate and statistically analyse the data for all 3 years (n=140) with an additional separate analysis to assess the novel data from the current project (n=60).

Conclusions
We hope that the unique nature of the course will promote the development of leadership and teamwork in an unfamiliar environment whilst also illustrating the importance of situational awareness and problem solving in medical practice.

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Food for Thought - A Multidisciplinary Approach to Teaching Nutrition Skills

Burton H, Fawcett J, Hall S, Botting N, Beale A, Sansom J
J Fawcett South Bristol Academy, School of Medicine, University of Bristol

Background
Malnutrition affects up to 40% of hospital inpatients\(^1\), and is recognised as having a significant negative impact on rate of complications, length of admission and overall patient mortality\(^2\). In *Tomorrow’s Doctors*, the GMC states that understanding nutrition is one of the core outcomes for training doctors\(^3\). However, many UK medical schools believe that they are not meeting these outcomes adequately \(^4\), and the need for new approaches to nutrition teaching has been highlighted by the *Need for Nutritional Education Programme*\(^5\).

Methods
We discuss an innovative multidisciplinary approach to teaching nutrition skills, and analyse feedback from participants who undertook the programme. 40 final year students rotated around educational stations provided by different members of the multidisciplinary team; including dieticians, specialist nurses, gastroenterologists and clinical teaching fellows. Topics included dietary supplements; long-term intravenous lines and total parenteral nutrition; nasogastric tube placement and pitfalls; percutaneous endoscopic gastrostomy; and consent and refeeding syndrome. Each station in this workshop was brief, and had a focus on interactive small-group content. Feedback on the session was collected, and the students’ opinions on the content and structure of the session analysed for discussion.

Results
Feedback from the workshop was overwhelmingly positive. Student deemed the content to be “interactive”, “engaging” and “very useful”, and specifically commented on the benefits of being taught by varying members of the multidisciplinary team. Of the 22 responses, 82% rated the content as “highly relevant”, and 91% rated the session as being of “high quality” overall.

Conclusion
We demonstrate a novel approach to teaching nutrition in undergraduate medical training, which has been shown to be enjoyable, educational and relevant to the GMC’s learning outcomes.

References:
Fourth Year Medical Student Perception of the Use of Visual Likert Scales to Self-Identify their Learning Needs during the Ageing and Health Module

G Kennedy, IM Rea
IM Rea, Centre of Medical Education, Queens University Belfast

Introduction
The General Medical Council has identified the need for medical students to become accustomed to seeking maximum benefit from feedback, self-assessment and reflection [1]. While students have been shown to find self-assessment useful in helping prioritise and steer learning [2], students do not automatically consider their learning needs upon entering a new module. In this study we used a Visual Likert Scale (VLS) method to track the outcome of student perceived self-assessment as an adjunct to student learning at the beginning and end of a new clinical module.

Methods
Fourth year medical students (252) were invited to anonymously complete a VLS to assess their self-perceived learning needs for important elements of the core curriculum, at the beginning and end of the four week module in Ageing and Health (A&H). The six clinical knowledge areas addressed were; history-taking skills, examination skills, medications, co-morbidity, nutritional assessment, and swallowing assessment. VLS values were compared before and after for the whole year group, between the six individual student blocks and for A&H modules undertaken early or late in the academic year, using Students t-test and Anova statistical methods. Student focus groups explored issues around student understanding of the use of the VLS as a tool for identifying their individual learning needs and for their current and future medical education and practice.

Results
Student VLS responses showed significant improvement for each of the six key areas for the total student year group and for individual student blocks except in two groups where no change in self-perceived history taking skills was noted. Earlier clinical exposure in other fourth year modules did not change outcomes. Key themes identified from the follow-on focus groups were the ease of VLS use and it use as an aid to identify self-directed learning needs. Limitations included misunderstanding of VLS use and concern about peer influence. Suggestions for future use included inclusion elsewhere in student and post-graduate e-Portfolios.

Conclusions
The results from the VLSs demonstrated an increase in the self-perceived competencies of the students after completion of the module. VLSs were generally viewed positively and a number of suggestions for future VLS use were identified.

General Practice in the simulation suite: Encountering emergencies in primary care

MS Harris, A Woodman, M Natarajan
MS Harris, University of Bristol Academy, Great Western Hospital, Marlborough Road, Swindon, SN3 6BB

Background
There is significant potential for medical emergencies to present directly to the GP in the primary care environment. Medical education within general practice has traditionally focussed on consultation-based learning. Medical simulation is a rapidly evolving tool in modern medical education, and allows the delivery of realistic scenarios in controlled environments. The aim of the project was to provide experiential learning in a simulated primary care setting to contextualise and reinforce students’ core clinical learning objectives during a general practice attachment.

Methods
Six simulation scenarios were developed in accordance with the University of Bristol learning objectives for the undergraduate 4th year attachment in general practice. Each scenario was delivered in the simulation suite, using a high-fidelity simulation mannequin. The scenarios were all medical emergencies presenting directly to the GP and requiring urgent recognition, management and escalation to secondary care. Quantitative feedback was collected from the students on semantic differential scales from 1-10. Descriptive statistical analysis of the results was thereafter performed. Qualitative feedback was collated using free-text boxes with consequent thematic content analysis performed.

Results
Four cohorts of students (n=31) reported consolidation of core clinical learning after practical application of their knowledge in a simulated, risk-free environment. This was quantitatively represented by a mean score of 8.29 for modification of understanding of core learning objectives following the simulation session. Quantitative analysis furthermore indicated a statistically significant increase in student confidence following simulation-based learning (mean difference between pre- and post-simulation scores = 5.0, p<0.05). The most prevalent themes on qualitative analysis were increased student confidence in the basic clinical management of medical emergencies in general practice and the positive educational value of immediate feedback via debriefing following each scenario.

Conclusion
Overall, simulation-based learning was demonstrated as a highly effective educational modality. The results here indicate a significant role for the use of simulation in general practice education. The reality of encountering an emergency scenario in primary care is a neglected area with little GP training directed towards emergency care provision in the primary care environment. We have expanded the undergraduate clinical scenarios described here and have subsequently begun delivering point-of-care simulation training to qualified GPs in the community to refresh their knowledge of emergency care provision. It is theorised that this may be of significant use for training GPs in the future.
How does a study skills programme impact self-regulation of learning among preclinical medical students?

DFM de Oliveira
DFM de Oliveira, medical student at Queen Mary University of London, Philpot Street 60, Floyer House, Room T324, London E1 2DP

Background and Purpose
Based on the theory of self-regulation of learning (SRL)\(^1,\,2\) and the need for stimulating self-awareness and metacognition during medical training, the purpose of this study is to evaluate the degree of SRL among first-year undergraduate medical students before and after their engagement in a five-week study skills programme, in order to evaluate the effect of the course on SRL. We will be also testing if the effect of the programme lasts by measuring the degree of SRL among second-year students, who engaged with the course during their first year of training. In addition, we are interested in understanding preclinical students’ perceptions on programmes designed to approach learning strategies, and which factors can influence SRL according to their perspective, since most studies focus on opinions derived solely from clinical students\(^3\).

Methodology
A mixed-methods approach was chosen, using the Self-Regulation of Learning Self-Report Scale (SRL-SRS)\(^4\) in order to estimate the degree of SRL among first-year and second-year students. In addition, focus groups and individual interviews were selected to deepen students’ impressions about the study skills programme and their perceptions on SRL.

Results
This study is based on a previous study that focused on evaluating the effects of the 5-week study skills programme on metacognition. The previous study found that students who attended at least one course session had a significant improvement in their overall exam scores in the medium-term setting, and also showed an increased awareness about selecting learning strategies, proving that this intervention is able to enhance metacognition. However, the question remains as if these effects persist in a long-term basis and impact medical students' careers thoroughly, and also if SRL is affected by similar interventions.

Discussion and Conclusions
SRL is understood as cyclical process involving key components, ranging from setting goals prior to approaching a task to self-monitoring during the task, and reflecting about strategies that were employed after the task is completed\(^1\). Although self-regulation is a highly desirable skill in order to improve academic outcomes, few interventions are consistently performed to stimulate its development, especially among struggling students\(^5,\,6\). This study expects to bring new insights about the impact of study skills interventions on the degree of SRL among preclinical medical students, and to reveal whether the effects of these interventions remain or decay as students experience the transition from preclinical to clinical settings.

References
How much of a buddy is a buddy? The value of near-peer mentoring to final year medical students in becoming a foundation doctor

D Mann, B Gayner, R Adhikary, A Tomsett, E King, N Adams, N Jakeman
D Mann, Clinical Teaching Fellow, University of Bristol at Bath Academy, Royal United Hospital, Combe Park, Bath. BA1 3NG.

Background and Purpose
The transition from medical student to foundation doctor is a critical time in the development of a new doctor - it is a time when professional identities are taking shape. It is also when the skills that are required of a junior doctor are developed and refined. In recent years there have been concerns that newly qualified doctors feel unprepared to take on their duties\(^1\)\(^-\)\(^3\) and are “not fit for purpose”\(^1\),\(^4\), calling into question preparations made by medical schools. One of the many strategies adopted to tackle this are near-peer buddying or mentoring schemes, which have high rates of student acceptability\(^5\),\(^6\).

Despite this, little is reported about whether the students feel assisted in becoming effective doctors. The University of Bristol encourages a formal programme of buddying between final year medical students and foundation doctors, where each student is allocated to a named volunteer foundation doctor.

The purpose of this research is to determine what the relationships are between the students and their mentors, gain an insight into what activity they engage in together and to discover if the students feel that they are helped in becoming foundation doctors.

Methods
Final year medical students studying at the Royal United Hospital were opportunistically recruited to take part in a focus group to discuss their thoughts and feelings about the near-peer mentoring system, with reference to the following areas:

1. The relationships between the final year medical students’ and their foundation doctor mentors
2. Do the students perceive that they get anything out of this relationship?
3. Do they feel that this relationship helps them with the transition into FY1 doctors?

The data was recorded, transcribed and analysed thematically.

Results
The final year medical students felt benefit from having a near-peer buddy working on the wards. An overall theme was that the students felt increased support and a sense of belonging in the working environment. They engaged in a wide variety of activities with their mentors and reported experiences that will shape them as future doctors. Full results will be presented.

Discussion
This work has shown that final year medical students’ value the use of near-peer mentoring schemes and that the students use the relationships with their mentors in ways that will ease their transition into foundation doctors. An intervention such as this should therefore be considered as an essential part of preparing final year medical students for work.

References
How ready are our Medical Students for Clinical Contact?

H Thursby, R Kirby
H Thursby, Clinical Teaching Fellow, Clinical Education Centre, Keele University Medical School, Royal Stoke University Hospital, Stoke-on-Trent

Background
Beginning clinical placement years can be nerve racking and exciting for medical students. To help them settle in quickly and get the most out of their placements, it is our responsibility to make sure they are adequately prepared. At Keele University Medical School, students start full time clinical at the beginning of 3rd year, with occasional clinical contact in first and second year. As Keele is undergoing a curriculum review of their undergraduate program, it is a good time to look at how well we are preparing them for clinical contact.

Methods
3rd year medical students are required to fill in a feedback questionnaire at the end of their clinical placement in surgery, which asks them to rate how useful different aspects of their placement have been and allows them to leave general comments. The first question on the feedback form asks students to rate how well prepared they felt for clinical contact from their 2nd year teaching. They rated this on a scale of 1 to 10, 10 being very well prepared and 1 being very poorly prepared. There was an option to circle ‘no’ for this question. This data was collected form the last 3 academic years, as there has been no major change in the curriculum over in this time.

Results
Data from the last 3 years gave us a cohort of 327 students. The most popular number selected on the scale was 7, with 97 students (29.7%) selecting this. The 77.9% of students selected a score in the higher half of the scale (6 or above). There were 5 students (1.5%) who selected no, indicating that they felt their 2nd year teaching left them unprepared for clinical contact.

Discussion and Conclusion
This data gives us an insight an aspect of their 2nd year education. Although the scores reflect that generally students felt well prepared for clinical contact, there is still room for improvement. As this did not specifically ask how we could improve this for students, or what they thought prepared them well, more research should be carried out to give us a better idea of how we can improve how well prepared students feel for clinical contact.
Identification and Exploration of the Expectations and Experiences of BM6 Students Entering Medical School

J Alom, S Curtis.
J Alom, Medical Student, MEDU, Faculty of Medicine, Highfield Campus, University of Southampton, Southampton SO17 1BJ.

Background and Purpose
Widening Participation (WP) in medicine has been a priority in Higher Education for over a decade\(^1\). Traditional and WP applicants often differ in terms of the cultural, institutional and financial barriers they face when applying to medical school\(^2\). The Medical Schools Council states it is a requirement of all medical schools in the UK to have a WP initiative\(^3\). The University of Southampton is a pioneer of Widening Access to Medicine and runs a six-year programme, BM6, for 30 students per year\(^4\). Current literature states that Information, Advice and Guidance (IAG) is a major factor in successful transition into Higher Education\(^5\). It is also reported that transition for WP students should be measured holistically and many factors such as, engagement, empowerment rather than just retention rates should be considered to make research findings more accurate\(^6\). This project aims to determine the expectations and experiences of BM6 Year 0 students entering medical school to determine how to optimise a successful transition for these students.

Method
45-minute focus groups were held using a semi structured framework. The focus groups were recorded and transcribed and the data were analysed using inductive thematic analysis. Initial coding was undertaken to identify key categories. The categorical data was further analysed to identify emergent themes and patterns.

Results
Three focus groups were held with a total of 16 participants. Analysis of the qualitative data revealed seven categories: culture, extracurricular, finance, perception, transition and integration, education, skills and attributes and support. The key themes were; participants expected medical school to be difficult, with unapproachable academic tutors and a lack of support and they would have liked more specific information prior to arrival. However, they initially experienced a manageable academic pace as well as surprisingly good academic support. The fear of stigma and stereotyping was a common theme throughout the focus groups, yet it was rarely experienced in the first few weeks.

Discussion
Overall, the expectations and experiences of the participants were positive. The induction period was a significant positive factor in the experience of medical students. A recommendation to the Faculty was to tailor the induction packs more towards BM6 students, as currently much of the content was directed at the BM5 programme. The gratitude and appreciation of being at medical school was strong amongst every single participant. Although some participants had negative expectations of medical school none of these inhibited the initial experiences.

Paper withdrawn
Integrating Human Trafficking into the Undergraduate Medical Curriculum

M Cooper, M Corrigan
M Cooper, Centre for Medical Education QUB, Whotlawe Medical Building, 97 Lisburn Road, Belfast, BT9 7BL

Background
Human Trafficking is a global problem. In the UK in 2014, 2,340 victims of human trafficking were rescued from exploitation. One in thirteen healthcare professionals in the UK are likely to come in contact with a victim of human trafficking, yet 86.8% of doctors across all services lack knowledge of what questions to ask those they suspect are being exploited. To our knowledge, there is little to no teaching on this topic in undergraduate medical education in the UK and there is no GMC guidance on teaching about human trafficking.

Methodology
In the summer of 2015 a second year medical student was employed for eight weeks as part of the summer studentship scheme at Queen’s University Belfast (QUB), to create teaching materials on trafficking to be integrated into the core undergraduate medical education curriculum and for the third year Student Selected Component (SSC) programme. An online survey was sent to undergraduate medical education teaching staff at QUB to explore their knowledge of human trafficking and for their views on incorporating human trafficking into their teaching. A questionnaire using a Likert scale and free text questions will be administered to students who received teaching on human trafficking through the core curriculum and who undertook the third year SSC.

Results
Twenty-three teaching staff from a variety of clinical, scientific and behavioural specialities responded to the online questionnaire. Just under 70% stated they had a fair understanding about human trafficking and 17% described their knowledge as poor. There was a lack of confidence in discussing human trafficking with undergraduate medical students, with just under half not confident and the remainder unsure. Just over 60% felt the topic was not relevant to their teaching but 39% were willing to teach it. In relation to their clinical work, 60% felt they were ill-equipped to respond to a person being trafficked and 78% felt that a workshop on human trafficking would be beneficial. Teaching materials have been developed for ethics, obstetrics and gynaecology, psychiatry, epidemiology and the social sciences for the core curriculum and for a new SSC on Human Trafficking.

Discussion and Conclusion
Integrating human trafficking into a very full undergraduate medical curriculum has been challenging. However, it is essential that staff and students are equipped with the knowledge and skills to respond confidently to victims of human trafficking.

References
Introducing third year undergraduate medical students to the principles of consent using a combination of small-group teaching and simulation-based learning

MS Harris, J Moffatt, M Natarajan
MS Harris, University of Bristol Academy, Great Western Hospital, Marlborough Road, Swindon, SN3 6BB

Background
Obtaining informed consent is complex, requiring an awareness of the medical, legal and ethical framework underpinning the process. The GMC state that ‘serious or persistent failure’ to ignore this medico-legal framework will put a doctor’s registration at risk. It is vital that trainee doctors are educated about the medico-legal issues of consent early in their career to ensure safe practice in the future. However, a study of British medical students indicated that 62.9% of the students did not feel confident in obtaining informed consent. This was noted to be secondary to a lack of experience of the consenting process and limited exposure to procedures for which consent is required. The use of simulation within undergraduate teaching is highly valuable, particularly in the promotion of communication and consultation skills. The aim of the study was to provide a comprehensive teaching session for third year undergraduate medical students, consisting of small-group teaching on medico-legal theory and a practical simulation session, to introduce issues surrounding consent and provide practical experience to contextualise and reinforce their learning.

Methods
An interactive small-group teaching session covering ‘informed consent’, ‘capacity assessment’ and ‘advanced directives’ was initially delivered. The students then undertook two simulation scenarios requiring application of the material covered. The scenarios included ‘a patient with delirium declining treatment’ and ‘a patient with a sustained major haemorrhage declining blood products’. Quantitative feedback was collected from the students on semantic differential scales from 1-10 and analysed using descriptive statistics. Qualitative feedback was collated using free-text boxes with consequent thematic content analysis performed.

Results
Two cohorts of students (n=15) were asked to rate their pre- and post-session confidence and knowledge of medico-legal issues surrounding consent. A statistically significant improvement in the difference between pre- and post-session levels of knowledge and confidence was observed (p<0.05). 100% of the students reported that the combination of methods utilised was ‘very effective’ and ‘informative’ in introducing the issues of capacity and consent.

Conclusion
The results suggest that the combination of traditional and practical teaching modalities was highly beneficial when introducing these advanced clinical concepts to the students. We felt that the practical session allowed the students to actively apply their knowledge and thus consolidated the initial learning material by promoting higher levels of learning within Bloom’s Taxonomy. While early in their careers, the students reported increased confidence post-session and we feel that this will be of considerable benefit in their future careers.

References
Introduction of a NHS hospital paperless medical record system: lessons to be learnt for undergraduate medical education

H Fox, R Talker, I Ng, C Maclellnan, A Gibbs, J Thomas, R Davies, M Lillicrap
M Lillicrap, Clinical Sub-dean, University of Cambridge School of Clinical Medicine, Addenbrooke’s Hospital, Hills Rd, Cambridge CB2 0SP

Background
The government has set a 2018 target for UK NHS trusts to adopt paperless medical records systems. In October 2014, Cambridge University Hospitals (CUH) NHS Trust (Addenbrooke’s Hospital) was the first in the UK to introduce a fully paperless system (eHospital). The purpose of this study was to assess how the introduction of a paperless system impacts upon undergraduate medical education.

Methods
This study used a mixed methods approach. A focus group, comprising final year student volunteers (who had experienced both the paperless and the conventional medical records), was initially used to identify key themes. These themes informed the development of a questionnaire survey, using Likert-scales and additional open space questions. This was piloted before being emailed to all 179 final year medical students at Cambridge School of Clinical Medicine, twelve months after the introduction of eHospital. Responses were collected over 22 days and stored securely in an online survey database.

Results
102/179 (57%) students responded to the survey. The quantitative data showed:
- Overall 45% preferred the previous paper-based system, 28% were neutral, and 24% preferred the paperless system for their learning.
- 75% felt that eHospital significantly disrupted learning during the period of implementation.
- 58% felt that eHospital made it easier to perform audit and research projects.
- 63% felt that the previous paper-based system was better compared to eHospital for preparing them for the junior doctor foundation programme.

Key emergent themes, relating to educational experiences, from the focus group and questionnaire, were:
- students perceived improved patient care overall as a result of eHospital
- improved student access to patient records (where training and resources were sufficient)
- impaired opportunities to practice key skills (e.g prescribing and documentation)
- reduced student involvement in clinical activities (both ward and clinic)
- changes in clinical communication skills by doctors
- reduced teaching opportunities in clinical areas

Key practical considerations identified by the data were:
- student log-on processes must be clear
- student specific training must be embedded in the implementation process
- hardware availability – students need resources to access paperless systems in the clinical environment.

Conclusion
The transition to a paperless medical records system has had both positive and negative impacts on student learning. Our study highlights lessons that could help other teaching hospitals when planning to implement a paperless system. Further work is required to address the negative impacts the implementation had on learning and to assess whether this changes with increased experience with the system.
Is tutor enthusiasm perceived differently by students and faculty?

TJ Lovatt, M Bartlett
TJ Lovatt School of Medicine, Keele University, Keele, ST5 5BG.

Background and purpose
Keele medical students spend 113 days in general practices (GP) throughout the 5 year programme. Faculty are required to support and monitor the quality of teaching in GP placements, however, a consensus on quality indicators in clinical teaching remains elusive. A recent local study has explored the relationship between quality indicators and student outcomes; it found no relationship between tutor enthusiasm and either student satisfaction scores or OSCE performance. These findings are difficult to explain as a number of earlier studies report a positive link between tutor enthusiasm and both student performance and satisfaction. One factor from the earlier study, that may be considered confounding, was that enthusiasm was scored by faculty GP tutor leads rather than the students themselves. Hence, this study is designed to elucidate whether GP tutor-leads have the same perception of ‘tutor enthusiasm’ as the students from their locality.

Methodology
This study aims to expound the term ‘tutor-enthusiasm’ and investigate how tutor-leads and students interpret and define the concept. Tutor-leads will be interviewed individually for their thoughts on tutor enthusiasm and what qualities were considered when scoring practices for enthusiasm in the initial study. Interviews will be transcribed and coded, emergent themes will be compiled and compared. Subsequently, Year-5 students will be invited to attend focus groups where semi-structured questions will be used to gather students’ thoughts and perceptions of ‘enthusiasm’ from their placement experiences. Focus group data will be analysed using a framework approach (familiarisation, identifying, coding, charting and interpretation) and subjected to thematic analysis. Coding will be verified by a second researcher.

Results
Firstly, the analysis from the tutor-leads’ interviews should reveal resonance or dissonance between tutor-leads in terms of how they define enthusiasm. Secondly, the emergent themes will be used to construct a conceptual framework of tutor enthusiasm that will be described for both tutor-leads and students. Thirdly, it should be possible to directly compare the perceptions of ‘enthusiasm’ between tutor leads and students.

Conclusions
These frameworks will be examined to draw conclusions on the perception of tutor enthusiasm within GP placement. The findings will be discussed with respect to earlier studies, local practice and the wider implications. Crucially, it should inform future studies, student evaluation activities and staff development agendas within the School of Medicine at Keele University.

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Junior Grand Round: One Year On, What we have learnt.

Fawcett J, Grove E, Botting N, Hall S, Burton H, Sansom J
Fawcett J, South Bristol Academy, School of Medicine, University of Bristol

Background and Purpose
The medical grand round has a time-honoured place in medical education, providing a forum for innovation and academic debate. However, medical student attendance is poor\(^1\) for reasons that remain uncertain. Over the last two years at the University of Bristol a junior grand round has been set up for Foundation doctors and medical students. The focus of this programme has been to teach beyond the curriculum with the hope of inspiring attendees about areas of medicine they might not have considered or about endeavours taken in parallel to clinical practice. We also wanted to provide a very positive weekly experience to remind students and doctors why they have chosen to enter this vocation amidst the current negativity in the press and social media.

Methodology
We organised a weekly junior grand round to take place during term time. Due to variable attendance by students last year, this year, speakers have been hand-picked and invited for their reputation as excellent speakers and experts in different fields. Topics were varied and included: “Medical education alongside clinical practice”; “Six years in Malawi” and “The reality of being a sports doctor – the London 2012 experience”.
Ongoing evaluation of the programme has been sought using qualitative questionnaires and the results of these have informed changes in the grand round in subsequent terms and different centres.

Results
The introduction of the junior grand round has been globally well received. In addition to the benefits identified last year of uniting different student years and an appreciation for informal consultant contact, benefits this year appear to be learning outside the curriculum, inspiring students with different career pathways and uniting students and doctors in learning.

Conclusion and Discussion
Curriculum-focused teaching carries the risk of limiting student exposure to exciting advances in medicine and the spectrum of work undertaken by doctors alongside their clinical endeavours. We have updated the programme and aim to share lessons learnt with other universities who may consider a similar scheme.

References
Keogh, Berwick and Beyond: How Integrated is Audit and Quality Improvement into Medical Student Curricula?

S Sinha, J Mushtaq, Z Htoo, M Colquhoun, C Ratneswaran
S Sinha, St George’s University of London, Cranmer Terrace, London, SW17 0RE.

Background and Purpose
The GMC document, 
"Tomorrow’s Doctors", highlights that every newly qualified doctor should understand and have experience in methods of improving patient care. The Keogh Mortality Review investigated the quality of care provided by the NHS trusts highlighted the need for continued learning and change. The Berwick Report similar echoed these findings, also stating that junior doctors energy must be “tapped, not sapped” due to their constant patient interaction and natural innovative tendencies. It stated that the single most important change that the NHS could make is to become a “system devoted to continual learning and improvement of patient care”.

Methodology
Questionnaires were supplied to students from three different London medical schools. This ascertained their knowledge of, and confidence in implementing their own audit, before and after a focused audit teaching session. The session focused on pragmatically implementing audit or quality improvement projects within their own institution, in addition to synthesising novel ideas on areas of sub-standard practice.

Results
79% of students had no previous formal teaching on audit or quality improvement projects. 96% felt they had not been given adequate opportunities to carry out an audit. 67% said they had ‘no confidence’ in gaining approval for an audit. On a scale of 1 (none) to 5 (very much), the students’ knowledge of the audit process (1.93 to 3.64, p<0.0001) and confidence in implementing a project at their institution (2.02 to 3.38, p<0.001) both increased after the session.

Discussion and Conclusion
The Department of Health highlighted that students are the “eyes and ears of the service today and safety leaders of tomorrow”. When medical students first enter their clinical years, they are able to cast fresh eyes on the current performance of the healthcare system and can help in evaluation. Nurturing them into their junior doctor careers in this way is important as also highlighted within the Berwick report. Our data shows that this potential is not fully utilised. Medical students have a poor understanding of the pragmatic implications of the audit process. A focussed course is both sought after by medical students and beneficial to health institutions, in meeting wider health goals.

References
Participation in a quality improvement project was an in-depth introduction to emergency care and proved to be a thought-provoking and useful experience. It contributed to a successful medical school application, and widened my understanding of NHS culture and innovation.

The quality improvement project was developing a patient checklist to empower patients and staff to ensure high quality care.

My participation involved delivering a pre-implementation patient survey, evaluating the staff awareness and conducting qualitative staff interviews to ascertain opinion and checklist usage. Organizational and communication skills were developed in recruiting, maintaining and training the volunteer team for the survey. Helping volunteers settle into roles in the ED developed my people management skills, which now aid communication in medical group projects and case-based learning. Evaluation and reflection as part of the project team set the foundation for reflection on personal learning at medical school.

Being part of this project also informs my future as a doctor by boosting confidence for placements and working with people. Observing the Emergency Department ‘up close’ helped understand staff and patient’s perspectives and the particular needs of emergency patients. Learning that clinical care can always be improved with innovative ideas, and that such ideas can be developed locally as well as part of national initiatives was also valuable.

In conclusion, volunteer experience of an ongoing quality improvement project was an innovative pre-medical school activity, which has enhanced my future learning. I gained tangible insights into how complex implementation of exciting ideas in the NHS can be, and also had a chance to see the complex, unpredictable and fast-paced nature of Emergency care.
Paper withdrawn
Medical leadership and clinician managers – time to engage undergraduates?

C Hobbs, E Burleigh, N Osman, H Begum, S Miah
C Hobbs, Medical Student, University of Sheffield, Beech Hill Road, Sheffield, S10 2RX

Background and Purpose
There has been a recent push to steer more clinicians into managerial roles within the NHS, requiring strong leadership skills from clinicians.¹ The Medical Leadership Competency Framework (MLCF) outlines the leadership competencies required by doctors, dentists and medical students in order to fulfil their role.² This project seeks to determine the attitudes and opinions of final-year medical students regarding leadership and clinician managers namely; importance, level of interest, future aspirations and currently quality of training on this subject.

Methodology
An online questionnaire was completed by 114 final-year medical students at 10 UK medical schools. A five point Likert scale was used for each question regarding students’ opinions of the importance of clinician managers, their interest in medical management and the quality of leadership training that they have received at medical school.

Results
94.8% of respondents agreed that clinicians should influence managerial decisions within a clinical setting, with 64.9% expressing an interest in undertaking such positions in their future careers. Only 9.6% of students rated their undergraduate leadership training as good, with 85.1% unaware of what a leadership position within the NHS entails. 62.3% would have appreciated more leadership training throughout medical school, and 78.0% believed medical leadership opportunities should be highlighted to students during their undergraduate education.

Discussion
Effective medical leadership and management (MLM) is essential for optimal patient care with convincing evidence, hospitals lead by clinicians are significantly associated with better performance outcomes than those led by non-clinicians.³ Our study suggests that final year medical students have poor insight of MLM and evaluate their undergraduate MLM training as weak. Medical students value clinicians’ input in managerial decisions and have a thirst for more MLM training; however the quality and quantity of training currently on offer does not meet this demand.

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Medical student empowerment during teaching; does the grade of teacher influence outcome

P Orchard, S Leong, H Claieaux, I D Hunter, J E Coulston
P Orchard, General Surgical Registrar, Musgrove Park Hospital, Taunton, TA1 5DA

Introduction
Empowerment is a key concept within undergraduate medical education. It is clear that a feeling of empowerment and ownership of their own education allows students to gain the most from a teaching session. Definitions vary but fundamentally the ability of the learner to explore ideas and concepts through questioning is a good surrogate marker. There is very little literature evidence concerning medical student empowerment and delivery of education.

We aim to investigate if student’s perception of empowerment changes according to the grade of doctor proving teaching.

Method
A retrospective study was used to assess teaching sessions from the year 5 academic teaching programme within one academy. The anonymised questionnaires focused on session participation, ability to answer and ask questions, based on a Likert scale (1 strongly disagree to 5 strongly agree). Sessions lead by registrars was compared to those led by consultants.

Results
All students returned questionnaires (n= 12), with 11 eligible for use. 16 teaching sessions were assessed; 9 taught by consultants, 7 by registrars. All 16 sessions required participation from the students.

Consultants scored higher in all categories relating to empowerment: The student’s ability to participate (4.6 vs 3.6, p=0.04), the student’s ability to answer questions (4.6 vs 3.8, p=0.04), the student’s ability to ask questions (4.5 v 3.7, p=0.07).

There was less variability in scores given to consultants (1.4 vs 2.7) and lower registrar scores were accompanied by comments stating lack of preparation, confusion and lack of knowledge on a subject.

There was also an increased utilisation of educational material provided by the consultants (4.5 v 3, p=0.01).

Discussion
Medical students feel more empowered during teaching sessions delivered by consultants. They are able to participate, ask and answer questions and direct teaching in a way which aids their learning. Students are likely to feel empowered when a teacher is organised, engaging and knowledgeable. It is likely that with their greater experience of teaching and the knowledge base this is why consultants scored higher than registrars.

This pilot study has begun to examine the delivery of teaching to ensure maximum empowerment of medical students. Further research is needed to examine methods of undergraduate teaching to ensure all education fully empowers students to learn.
Medical student involvement in and benefit from research and audit experience: the MEDical Student Experience of Audit and ResearCH (MED-SEARCH) survey.

S P Trethewey, R I Norman
R I Norman, Department of Medical and Social Care Education, University of Leicester, Leicester LE1 9HN

Aims
Medical research provides the evidence base for agreed standards of practice while medical audit enables professionals to monitor their practice against these evidence based standards. This study aimed to explore medical student understanding of, involvement in and attitudes towards research and audit. A particular aim was to evaluate the perceived benefit to medical students of research and audit training.

Methods
An anonymous, cross-sectional, 70-item self-report questionnaire was administered to current medical students from all years at the University of Leicester. A mixture of open, closed and Likert Scale questions were used. Thirty-two questions related to student experience of and attitudes towards research/audit training.

Results
In total 114 questionnaires were completed (response rate 10%). From their time at medical school so far, 48 respondents (42%) had been involved in research or audit, 23 respondents (20%) had presented research or audit data at a professional meeting and 4 (4%) had authored/co-authored at least one research or audit publication. Of students who claimed involvement in research or audit during their medical training to date, 24 (50%) had done so in their own time (extra-curricular: not during a student selected module or intercalated BSc). One hundred and eleven respondents (97%) considered that medical students could benefit from participating in research and 107 respondents (95%) considered that medical students could benefit from participating in audit. In open questions, frequently cited benefits included ‘Acquisition of transferable skills’ (n=56, 49%) and ‘CV building/career progression’ (n=26, 23%). Sixty one respondents (54%) considered that they needed to participate in research and 65 (58%) considered that they needed to participate in audit to achieve their career aspirations. One hundred and four respondents (91%) would recommend participating in research to new medical students and 99 respondents (88%) would recommend participating in audit to new medical students. Ninety six respondents (85%) stated that they were interested in participating in research and 95 respondents (85%) stated that they were interested in participating in audit in the future.

Conclusion
This study suggests that medical students perceive value in obtaining experience of research and audit during their training and over half consider this experience to be necessary to be able to achieve their career aspirations. Many students go on to participate in research or audit projects during their time at medical school. Transferable skill acquisition and CV building were cited as benefits to participating in research/audit.
Medical student Resilience: A cross-sectional study

M Doris, C Mulholland
M Doris, CT2 Psychiatry, Holywell Hospital, 60 Steeple Road Antrim, BT41 2RJ

Background and Purpose
The concept of resilience has been described\(^1\) as the capacity to ‘bounce back’ from adversity. The relevance and impact of this quality to deal with complex issues that medical students, and subsequently doctors, experience has become increasingly recognised by the GMC who recommend that medical schools make emotional resilience training an ‘integral part’ of the medical curriculum\(^2\). Despite this affirmation little is known about how resilient medical students are as they enter medical school.

Methodology
We offered all first year medical students the opportunity to attend targeted ‘resilience workshops.’ The sessions covered practical areas of resilience training for both general student life and specific medical student issues. Sessions were delivered by psychiatry trainees who had attended a training session. The workshops combined lecture slides with case study vignettes and video testimonies made by previous medical students. Prior to the delivery of these sessions we asked students to fill out the Connor-Davidson Resilience Scale (CD-RISC), Perceived Stress Scale, Budner’s Tolerance of Ambiguity and the Warwick-Edinburgh Well-Being scale (WEBWMS) to measure baseline levels of resilience and other personality traits.

Results
248 of the 268 students 93% attended the sessions - of which 228 completed the questionnaires. Mean scores for resilience (73.64) were slightly higher than equivalent populations. Higher levels of resilience correlated with better scores of global well-being and lower perceived stress. There were significant gender differences – females scored lower mean resilience & well-being scores and higher levels of perceived stress on their initial score.

Discussion and Conclusions
This study suggests that first year medical students are in fact relatively resilient. Our results support\(^3,4\) evidence that higher levels of personal resilience as scored on the CD-RISC correspond with higher levels of self-reported wellbeing. Anything that can arrest the noted decline in resilience may be useful in protecting our medical students from distress, and help towards establishing a framework in line with GMC guidelines for medical education. We intend to establish follow-up studies to explore the reasons why levels of personal resilience may fall across the medical course.

Out of Hours Experience as a Medical Student: What Do Students Think?

GM McGrory, A Collins, A Riddell
GM McGrory, Clinical Teaching Fellow & Honorary Clinical Lecturer, Hairmyres Hospital, 218 Eaglesham Road, East Kilbride, G75 8RG.

Background & Purpose
Medical students are exposed to a range of clinical environments through their clinical placements, with the aim that this experience should prepare them for working life as a doctor. Arguably, this should involve exposing students to all environments that they will later find themselves working in, and this therefore should include out of hours (OOH) experience. Within Hairmyres Hospital, it is a requirement that students undertake OOH experience and aim of this project was to establish student opinions regarding the value of this experience.

Methodology: This project was undertaken using a questionnaire which asked: (1) What are your thoughts on OOH experience as part of your clinical placement?; (2) Did you attend an OOH session? If yes, how many weekends/evenings?; If no, why not?. Data was collected anonymously and analysed using a thematic framework.

Results: 73% of students undertook OOH work. Evening sessions were most popular. The reasons cited for not undertaking OOH work included revision, social activities, travel costs, and employment. Less than half could see the potential benefit in gaining additional experience in hospital out-with routine hours. 13% enjoyed the experience whilst 80% found it to be of no benefit. Those who enjoyed the experience stated they 'enjoyed seeing how different hospital is' OOH. Those who did not enjoy it described it as being 'useless' as the hospital was 'quieter'; and commented that staff were busier/stressed and did not have time to teach them.

Discussion & Conclusion
The results have demonstrated that student expectations of OOH experience is different from reality. From the feedback, students’ expectations were that they would receive the level of one-to-one teaching they do during routine hours. Many felt that the experience was 'useless' as no-one had time to teach them, however, experiencing the OOH environment is the learning experience. The results pose questions about how we can change student perceptions of the hospital OOH and how we better engage them in experiencing this valuable opportunity as an undergraduate. It would appear that there is resistance to this at present. More work needs to be done to integrate the students into OOH work through communication with hospital staff. However, evaluating why some students enjoyed the experience is a promising avenue to explore in future.

References
Paying it Back! A pilot FY0 led Peer Teaching OSCE Course

A Bannon, C Clendinning, S Kirk, N Leonard
A Bannon, FY1 General Medicine, Antrim Area Hospital, Northern Ireland, UK

Background and Purpose
We describe a pilot Peer Teaching OSCE course designed and led by Foundation Year Zero (FY0) students for third year students preparing for their clinical OSCE examinations. Our programme consisted of one day of interactive and practical based presentations, followed by a second day with a formal 8-station OSCE and individual feedback session. The presentations and OSCEs were designed by the FY0s, who acted as examiners, simulated patients and invigilators. A ‘standard-setting’ session was facilitated by two consultants to ensure FY0s were prepared to examine OSCEs.

Previously there was no provision for Peer Assisted Learning (PAL) opportunities in the undergraduate clinical curriculum at our institution. We evaluated the use of this pilot programme to establish its effectiveness as both a learning tool for students and an opportunity for FY0s to develop competencies in teaching.

Methodology
Every eligible third year student (n=13) took part in this non-compulsory pilot programme. 12 FY0s signed up to design and participate in the programme. Quanti-qualitative questionnaires, using Likert and open-text responses, were designed and disseminated to both student groups before and after the programme. Third year students were sent an email when they had undertaken their formal OSCE examinations to gain insight from further reflection.

Results
Every third year student was extremely confident in the ability of the FY0s in teaching them (Likert 4.3/5), but almost every student had no experience of senior student teaching. All FY0s strongly agreed (n=9) or agreed (n=3) that they had a role to play in supporting less experienced peers in their learning, but for the majority (n=10), this was their first opportunity to do so.

Third year feedback on the programme was overwhelmingly positive. Recurring comments included that the course helped to highlight areas of practice needing improvement, and that the programme had allowed students to approach OSCEs systematically. Every student commented that they were more confident following participation in the programme.

Discussion and Conclusions
PAL is recognised as an effective strategy in supporting learning and teaching for medical students. GMC guidance states that medical graduates are expected to ‘function effectively as mentor and teacher’. We have established that a student-led PAL programme in a large district general teaching hospital is an effective and sustainable method to complement the learning of undergraduate students and develop student competence in teaching, feedback and appraisal.

References:
2. KL Bene et al. When Learners Become Teachers – a review of Peer Teaching in Medical Student Education. Fam Med, 2014; 46(10): 783-7
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Pharmacists on the Frontline: Lecture Based Acute Simulation (LBAS)

C Ratneswaran, J Mushtaq, K Dodd, TK Khong
C Ratneswaran, St George’s, University of London, Tooting SW17 0RE

Background and Purpose
New Royal Pharmaceutical Society Guidelines\(^1\) propose that pharmacy services should expand, increasing clinical responsibility to offload National Health Service burden. Minimal curriculum focus and consequent lack of confidence within the profession in managing acutely unwell patients are recognised barriers to uptake.

Methodology
A 6-hour LBAS course was designed to teach a structured approach to deteriorating patients. It utilized actors with real-time remotely controlled projected observations of heart rate, blood pressure, oxygen saturations, respiratory rate and electrocardiogram. Students reacted to deteriorating physiology, via situation pausing and group decisions on 1 of 5 intervention options, with actor and observations responding dynamically. Scenarios would progress to stability or further deterioration according to a pre-designed algorithm.

Results
On a score of 1 to 5, MPharm students (n=73) rated interactivity as 4.7±0.6, relevance 4.7±0.6, engagement 4.6±0.6 and educational value 4.6±0.6. Feeling of preparedness (4.3±0.7 vs 1.6±1.1, p<0.001) and confidence (4.1±0.8 vs 1.7±1.3, p<0.001) in managing acutely unwell patients after the session were both significantly greater compared to before the session.

Discussion and conclusions
Students found the LBAS highly informative and relevant, with increased confidence in managing acutely deteriorating patients. High interaction and engagement suggests LBAS may be useful in introducing and encouraging students to uptake future independent prescriber accreditation and expanding clinical roles. LBAS offers a low fidelity method of increasing skill and hence confidence that may help increase uptake of independent prescribing accreditation and allow development of front-line community pharmacy services.

References
Piloting the use of simulation to develop medical students’ skills in the assessment and management of acutely unwell older people

R Adhikary, D Mann, E King, N Adams, A Tomsett, B Gayner, N Jakeman
R Adhikary, Clinical Teaching Fellow, University of Bristol at Bath Academy, Royal United Hospital, Combe Park, Bath. BA1 3NG.

Background

Medicine for older people has in the past suffered from a negative image amongst health care professionals1,2 despite the increasing numbers of older people admitted to hospital3. Both medical students and junior doctors find the assessment and management of older hospital inpatients as complex and challenging1. Indeed, management of common conditions such as delirium remains poor3. Despite this, and the drive to improve standards4, medical students have been reported to avoid interacting with elderly and vulnerable inpatients5. As a result, many novel interventions have been trialled to engage students in interacting with these challenging but rewarding patients4, however there remain few reports of simulation as a tool in the education of elderly care6,7. At the Royal United Hospital we have created simulation scenarios developed around the common problems seen in medicine for older people allowing students to specifically practice the skills involved in assessment and management of these patients.

Methods

Simulation scenarios were designed to include a mixture of inpatient and new admission presentations and to cover a range of curriculum requirements including delirium assessment, multidisciplinary team working, gathering of collateral history, falls assessment and managing patients with cognitive impairment. An actor was used as a patient in addition to a high fidelity simulation model. Fourth year clinical medical students studying in their medicine for older people unit underwent the simulation training in group sizes of 3 to 4 students and were asked for their quantitative and qualitative feedback.

Results

Preliminary results show that the students find this a valuable method of consolidating the knowledge and skills that they have been acquiring in older people’s medicine. The sessions have been well received with over 90% of students rating the simulation as extremely useful. Qualitative feedback has also been extremely positive. A full breakdown of results will be presented.

Discussion and Conclusions

The simulation sessions have had excellent feedback and have helped the students to consolidate their learning and to practice the skills they will need as future junior doctors who will be caring for an increasingly elderly and frail patient group. Based on the success of these sessions, we plan to develop them further and to assess their educational impact.

References

Prescribing Simulation: A Tool for Advancing Undergraduate Medical Student Confidence in Prescribing Skills

E King, N Adams, A Tomsett, R Gayner, R Adhikary, D Mann and N Jakeman
E King, Clinical Teaching Fellow, Bath Academy, Royal United Hospital NHS Foundation Trust, Combe Park, Bath, BA1 3NG

Background and Purpose
Evidence suggests that newly qualified doctors are neither confident nor competent in prescribing, with a lack of training recognised as a significant contributing factor.¹,² Research studies evaluating interventions which may improve prescribing skills have concluded that outcome measures should be based on simulated real-life practice, involving the completion of actual prescriptions.³ In view of this, we sought to identify whether undergraduate students' confidence in prescribing could be improved using a structured prescribing simulation programme in addition to prescribing tutorials.

Methodology
A high-fidelity simulation programme involving ten different clinical scenarios was introduced for final year medical students at Bath Academy in addition to prescribing tutorials provided by the University of Bristol. Post-programme questionnaires collected quantitative data using a five-point Likert scale to assess students' confidence in prescribing in the different scenarios. Qualitative data was also collected and reviewed using thematic analysis.

Results
Nineteen final year medical students completed the questionnaires. Baseline median confidence in prescribing for each clinical scenario prior to the simulation session was 2 or 3. This increased to 4 for every clinical scenario following the simulation session. However, following the teaching sessions only 37% of students felt prepared to prescribe in real clinical situations; many students felt they need more practice.

Discussion and Conclusions
We have demonstrated that teaching prescribing skills through simulation improved student confidence in prescribing. However, it is unclear whether this was due to simulation as a useful teaching tool or merely due to repetition of a prescribing task. More support is required to help students feel prepared to prescribe as junior doctors; additional practice and repetition is key. Simulation is costly and resource-intensive and further research is required to assess the best method for reinforcing prescribing learning.

Prescribing Simulation: A Tool for Advancing Undergraduate Medical Student Prescribing Skills – The Students’ Perspective

N Adams, E King, R Gayner, A Tomsett, D Mann, R Adhikary and N Jakeman
N Adams, Clinical Teaching Fellow, Bath Academy, Royal United Hospital NHS Foundation Trust, Combe Park, Bath, BA1 3NG

Background and Purpose
Prescribing skills teaching is a fundamental component of undergraduate medical education. Research evaluating interventions that may improve prescribing skills has concluded that outcome measures should be based on simulated real-life practice involving the completion of actual prescriptions. Simulation has already been shown to be beneficial in offering experiential learning in undergraduate education. In view of this, we sought to identify whether undergraduate medical students perceive high fidelity simulation to be a valuable learning tool in addition to small-group tutorials when learning prescribing skills.

Methodology
A high-fidelity simulation programme was introduced for final year medical students at Bath Academy alongside prescribing tutorials from the University of Bristol. Post-programme questionnaires collected qualitative data concerning students’ views of the prescribing simulation sessions, compared with the prescribing tutorials. These were then reviewed using thematic analysis.

Results
Nineteen final year medical students completed the questionnaires. 74% of students found tutorials alone to be the best teaching style when learning how to prescribe. Common themes identified in support of the tutorials included a greater opportunity to learn basic facts and theory and a better environment to ask questions. However, there was an overarching theme that simulation reinforces the practical learning aspects of prescribing. 94% of students felt that future prescribing programmes should continue to use both tutorials and simulation as they complement each other well.

Discussion and Conclusions
Students perceive small-group tutorials to be the most useful method of learning prescribing skills, with simulation offering additional value. Prescribing simulation is beneficial for consolidating learning, particularly with respect to practical aspects of patient management. It will be recommended to the University of Bristol that simulation is included in prescribing teaching programmes for all final year medical students.

Radiology teaching: medical student perspectives on an integrated approach with bedside teaching

R Aggrawal
R Aggrawal, Clinical Teaching Fellow, Newham hospital, Barts Health NHS trust, London

Background
The role of radiology in clinical medicine is increasing and it is essential for medical students to understand the basics. However, studies have shown that radiology is under represented in medical school curriculums\(^1\) and foundation doctors do not feel adequately prepared for clinical practice\(^2\). Radiology can be integrated to support teaching across many areas for example anatomy\(^3-6\) and physiology\(^7\). It is important to keep radiology teaching clinically relevant as students are learning to be doctors, not radiologists and need to understand its impact on patient management\(^8\). Bedside teaching has been described as one of the ideal clinical teaching modalities\(^9\), and integration with radiology teaching would therefore support students with both of these learning needs.

Aim
To evaluate whether radiology teaching can be integrated with bedside teaching to improve clinical skills as well as radiological interpretation.

Method
Over an academic year, final year medical students rotating through our hospital had a variety of small group bedside teaching sessions in parallel with radiology teaching sessions. This involved examining patients with various pathologies and formulating differential diagnoses, investigation and management plans. As well as radiological interpretation, the radiology teaching related to clinical presentation and examination findings expected and reinforced clinical skills learnt from bedside teaching. A structured questionnaire was filled in by each student that used a five point Likert scale and free text spaces to explore views on integration of radiology and bedside teaching.

Results
At present, 75% of students have undergone the teaching sessions, with the remaining 25% to undergo them in the next couple of months. We are also awaiting completed questionnaires from some of the students. Preliminary results show that all students (n=9) feel their radiology interpretation skills have improved and feel more confident with this. All students agree or strongly agree that they are now more confident formulating differential diagnoses, investigation and management plans compared with bedside teaching alone, with 89% of students improving their ability to relate radiological abnormalities to clinical findings. 8 out of 9 students said it was useful to reinforce clinical knowledge through radiology teaching and all students recommended radiology teaching as an effective adjunct to bedside teaching for developing clinical skills.

Conclusion
Integration of radiology and bedside teaching has had positive feedback from medical students and can successfully support the development of clinical skills.
We will present our experiences of designing and delivering these sessions.

References
Research methods: ‘Data–mining’ subjectivity through point of View (PoV) filming and the elicitation interview

GJ Gormley, J Skinner
GJ Gormley, Centre for Medical Education, Queen’s University Belfast, N Ireland.

Background and Purpose
The traditional face-to-face interview is a fundamental research tool in qualitative research. Whilst this method of data collection can provide many insights into subject’s experiences, it can often fall short of providing a complete picture.[1] Point of View (PoV) interviewing is an elicitation technique used by a number of disciplines, such as anthropology, as a means of enriching data obtained from research interviews. PoV filming continues the long tradition of filming in anthropology that began with filming fieldwork in the early twentieth century and extended to giving respondents cameras to film their social worlds. This particular twenty-first century form of filming development devolves the camera to the respondent, capturing an approximation of what they see or the direction they are looking in through a digital camera fixed to the head or body or digital video glasses. [2]

Methods
By recording a research subjects’ first person viewings, either by attaching a digital video-camera or wearing digital video-glasses, can afford deeper insights into their experiences. Examples can include naturalistic settings such as real clinical environments or simulation-based learning activities to explore decision-making in healthcare contexts. Here, we are making clinical scenarios our field, and making the digital recordings a part of our ethnography.

Results
PoV filming can promote making visible the unverbalizable and does not depend as much on memory or recall. Furthermore it is less subject to the vagaries of post-hoc rationalisation. From a cognitive anthropology perspective, subjects are confronted with their PoV footage examining the underpinnings of bodily practices as they unfold: to help facilitate the verbalisation of implicit knowledge and data-mining of subjectivity. With the interview aspect, there is a targeting of their inner consciousness

Discussion and Conclusions
The PoV elicitation interview method has a multitude of possibilities and applications to it, not least in health profession educational research and teaching. Using examples this presentation will explore some of the many crossover implications with PoV interviewing, with particular reference to research methods and teaching practices. Practical issues, including technical and governance issues will also be discussed.

References
Should research and audit projects be compulsory during undergraduate medical training? The MEDical Student Experience of Audit and ResearCH (MED-SEARCH) survey.

S P Trethewey, R I Norman
R I Norman, Department of Medical and Social Care Education, University of Leicester, Leicester LE1 9HN

Aims
Medical research provides the evidence base for agreed standards of practice while medical audit enables professionals to monitor their practice against these evidence based standards. This study aimed to explore medical student understanding of, involvement in and attitudes towards research and audit. This study also sought to explore attitudes towards mandatory research and audit projects during medical school.

Methods
An anonymous, cross-sectional, 70-item self-report questionnaire was administered to current medical students from all years at the University of Leicester. A mixture of open, closed and Likert Scale questions were used. Eleven questions related to student perceptions of research/audit opportunities and the requirement for research/audit projects.

Results
In total, 114 questionnaires were completed (response rate 10%). Using a Likert Scale of 1-5 (1=‘No opportunities at all’, 5=‘Plenty of opportunities’), respondents felt that there are fewer opportunities to participate in research/audit projects as part of the MBChB programme than opportunities to participate in extracurricular research/audit projects (median[IQR]: 2[1] vs. 3[1]). Fifty four respondents (47%) felt that medical students have enough time to gain experience in research/audit. In open questions, frequently cited barriers to accessing research/audit opportunities included ‘time restraints’ (n=71, 62%) and a ‘lack of awareness of available projects’ (n=62, 54%). Suggestions to increase student involvement in research/audit included ‘Better advertising and signposting of opportunities’ (n=39, 34%), ‘Providing more opportunities’ (n=20, 18%) and ‘Adjusting the curriculum to allocate time for research or audit’ (n=35, 31%). One hundred and nine respondents (96%) favoured an optional, dedicated research project based module for students interested in research but not wanting to commit to a full intercalated BSc year and 91 respondents (80%) reported that they would be interested in participating in a dedicated research project based module. Only 39 respondents (34%) considered that a research project should be mandatory, whereas 54 respondents (48%) considered that an audit project should be a mandatory part of the curriculum. Of those in favour of mandatory research and audit projects, the average length of time that respondents recommended should be allocated to carry out such projects were 6 weeks and 3 weeks respectively.

Conclusion
While many students expressed interest in participating in research and audit, this study suggests that mandatory research or audit projects are unlikely to be well received by a significant proportion of medical students due to already busy timetables. Medical educators should consider ways to integrate optional research and audit opportunities into the medical curriculum.
Simulated Practical Wound Care Competency for Undergraduate Medical Students

J Jones, J Harris
J Jones, Clinical Skills Tutor. Imperial College Healthcare NHS Trust, St Mary’s Hospital, London, W2 1NY

Background and Purpose
To introduce basic wound care management into the Undergraduate Clinical Skill Competency programme to allow students to assess, plan, implement and evaluate a ‘road rash’ simulated wound (insitu). Formal wound care teaching is not carried out within the Undergraduate curriculum. Students are taught theory in a skin lecture in year 1, learn suturing in year 3 and apply dressings to wounds in primary care in year 5. However none of these opportunities include wound care management. A study by Patel et al (2008) found that the total hours devoted to wound care education in UK Medical schools equalled 4.9 hours over 5 years. Wound care and wound principles is usually informally taught on an ‘ad hoc’ basis. Based on the lack of wound management training during tertiary studies (Fourie 2013), a design was submitted for School approval.

Methodology
Medical students at one hospital site (n=44) were taught in an interactive 2 hour session. This included a short theory presentation and the wearing of a ‘hybrid’ prosthetic bespoke road rash wound typically seen from falling off a bicycle. Students worked in pairs to clean the wound using a sterile technique, irrigate, debride and dress the wound adhering to the Trust wound care dressing chart. Feedback forms were used to assess student’s overall experience of using an interactive wound and its authenticity/realism. Assessing the overall learning and teaching effects the student gained from the session, and receiving feedback (verbal) on what their understanding was before and after the teaching.

Results
The first pilot session for 44 student’s accumulative results showed that 30 students strongly agreed the simulated wound session provided a useful learning experience. 14 students agreed the overall experience was engaging and 28 strongly agreed with the statement. Student comments in free text were also encouraged. Feedback was extremely positive; students were highly engaged with the interactive teaching which facilitated and incorporated the holistic care of a patient. Offering a different learning opportunity for students in small teaching groups was beneficial, it encouraged communication skills as well as learning about basic wound care management.

Discussion and conclusions
Overall results show this competency has provided students with a framework to improve their understanding of wound classification and depth of destruction in relation to managing a wound. Once approved by the College, this topic was rolled out to other clinical sites. Numbers increased to over 300 3rd year medical students.

References

Something for everyone: Can the same radiology tutorial be useful and accessible to multiple year groups? Evaluation of a pilot course

E Southgate, J Ehsanullah, S Singh
E Southgate, Clinical Education Fellow, Undergraduate Medical Office, Chelsea & Westminster Hospital, 369 Fulham Rd, London SW10 9NH, UK

Background
Whilst numerous studies have shown benefits of cross-year peer tutoring\(^1\), there is little in the literature to examine the success of teaching sessions aimed at audiences of multi-level learners. In response to requests from both first clinical year medical students (Year 3) and final year medical students (Year 6), for more formal radiology teaching, we set out to explore whether offering tutorials to multiple year groups would be valued by both junior and senior clinical students. Our aim was to provide a satisfactory balance between scheduled and non-scheduled learning opportunities for students with feasible timetables for busy clinicians.

Method
Radiology learning objectives for both Year 3 and Year 6 students were reviewed by Clinical Teaching Fellows and Radiology Specialist Trainees. Tutorials were designed to meet the common learning objectives of year 3 and year 6 students. Both year groups were invited to attend two non-compulsory tutorials. Subsequently, students were invited to evaluate the tutorial by completing a questionnaire with a mixture of Likert scale agreement questions, forced choice questions and free-text questions.

Results
42 student responses were collected from two tutorials. Tutorials were attended by similar proportions of Year 3 students (72%-75%) and year 6 students (18%-25%), with two year 5 students attending one tutorial after hearing about tutorials via colleagues. Satisfaction levels, as measured by Likert agreement scales were high. Overall 86% of students thought tutorial content was appropriate for their level of learning. One or more tutorials were described as “too easy” by three Year 3 students (10%), and two year 6 students (22%). Only one student from Year 3 found one tutorial “too difficult”. 89% of students said they would recommend the tutorial to a colleague at their stage of training. Of the five students who would not recommend the tutorials, three were from year 3 (10%) and two were from year 6 (22%).

Conclusions
Results from this pilot study show that these radiology tutorials were well received by students from both year groups. Satisfaction and recommendation of tutorials were similar across all year groups in terms of numbers of students, although a greater proportion of year 6 students found the tutorials too easy and would not recommend them to others at the same stage of training. Offering cross-year teaching to multi-level learners at clinical sites may enable increased access to learning opportunities for students on clinical placements where the opportunity for scheduled teaching delivery is at a time premium.

Story telling to assist learning in undergraduate medical education

N Salooja, G Ormerod
N Salooja, Imperial College London

Background and purpose
Stories are widely cited as a method of guiding memory retrieval. Two features linking story telling to memory for which there is experimental evidence are the use of spatial learning strategies and use of sensational content. We designed a story to support learning of anti-microbial therapy for year 5 medical undergraduates which included these two key elements. Additional aide-memoire techniques deliberately inserted were emotion, word play/mnemonics and a familiar story line.

Methodology.
A story based on Red Riding Hood (RRH) was read to 32 students to teach appropriate antibiotics for 3 conditions. The story includes different locations including forest and grandmother’s cottage. 2 sensational elements were added (a sexual relationship between RRH and woodcutter, and the granny with augmented breasts), 5 emotional triggers (embarassment, humiliation, passion, panic an anxiety) and 3 word play/mnemonics. An early evaluation within two days of the teaching sought quantitative and qualitative data with open questions about utility and what was learnt. A second evaluation at 3-months considered story recall and long term retention of key learning outcomes.

Results
Of 32 participants, 29/32 considered the teaching useful, all learning a specific antibiotic treatment (7 UTI, 12 hospital acquired pneumonia and 13 GI sepsis). Utility was perceived as memorability (n= 11), exam value (n=3), engaging/humour (n=6 ), real life context (n=2). Memorability was associated with repetition (n=2), humour (n=2) sensationalism (n=2) linking information to objects and names (n=2)

Of 8 students who agreed to participate in a long term evaluation 4 responded and their ability to recall the gist, learning outcomes, sensation, emotion and word-play analysed. Three wrote a gist, 3 remembered 2/3 infections and their correct antibiotic treatment. Three remembered 2/3 word-plays Two remembered at least one element of sensational content. Only one participant recalled emotional content. Two points were incorrectly re-called.

Discussion
Within one week of the story, students considered it useful and memorable. Three months later, students remembered enjoying the teaching but there was little evidence for long-term retention of key learning points. The most effective retention strategy was word-play and the least was emotional content. The most frequently remembered learning point was use of augmentin for hospital acquired pneumonia. This may have been due to using a combination of sensation, humour and word play within a familiar story line.

References
Student perceptions of and motivations to attend non-compulsory, near peer prescribing teaching


Background and purpose
Prescribing errors are an important cause of iatrogenic harm, inpatient morbidity and mortality - with junior doctors responsible for the majority of hospital-based prescribing.\textsuperscript{1,2,3} Improving the quality of undergraduate prescribing education, thus improving the prescribing skills of junior doctors, is a key area of focus for patient safety.\textsuperscript{4} In South East Scotland we have developed and deliver voluntary, near peer prescribing tutorials to 3\textsuperscript{rd} and 5\textsuperscript{th} year medical students. These cover the fundamentals of safe prescribing before progressing to more complex clinical scenarios, complementing the formal lecture-based pharmacology teaching. We have been challenged at times by lack of engagement from the student body. As a voluntary initiative delivered by junior doctors, participation from students is crucial to ensure continued workshop delivery. We wanted to explore what motivates our students to attend non-compulsory, peer-led sessions and their preferred methods of learning in this important area.

Methodology
A questionnaire will be delivered through an online platform to 3\textsuperscript{rd} and 5\textsuperscript{th} year University of Edinburgh medical students. They will be asked to self-evaluate their experiences of prescribing teaching, indicating their preferences for learning styles, preferences of teacher and the motivating factors prompting them to attend voluntary, near-peer teaching sessions.

Results
A mixture of qualitative and quantitative data will be presented exploring student preferences of prescribing teaching environments, and student motivations to attending non-compulsory near-peer prescribing sessions. The researchers hope to identify the main themes prompting student engagement with near-peer prescribing teaching and the student perceived benefits of these sessions.

Discussion & Conclusions
By identifying the teaching preferences and motivations of students to attend voluntary prescribing teaching, it is hoped this information can be used to inform the structure and planning of future undergraduate prescribing teaching sessions. We hope this will in turn lead to an increased student participation in non-compulsory, near peer prescribing sessions – with a view to providing tomorrow’s doctors with better prescribing skills.

Student Selected Components – What do the students think?

J Moffatt, K Jones
J Moffatt (joanne.moffatt@gwh.nhs.uk) – Clinical Teaching Fellow, Undergraduate Academy, Great Western Hospital, Marlborough Road, Swindon, SN3 6BB

Background
Student selected components (SSCs) are parts of the curriculum that allow students to choose what they want to study. The GMC requires that 10% of the undergraduate teaching programme must be made up of SSCs, which must be integral to the curriculum\(^1\). They offer the opportunity to demonstrate mandatory competencies while exploring an area of interest, which may not be routinely covered. The University of Bristol offers a wide range of SSC projects run by multiple Academys over a 3-4 week period at the end of the summer term assessed by a written project. Several international trips are linked to projects in expedition and tropical medicine. We wanted to explore the factors influencing student’s choice of SSC. Additionally we aimed to identify what the students gain from the SSC experience.

Methodology
An online questionnaire was developed and distributed to all students who completed an external SSC during July 2015.

Results
93 students completed the questionnaire; 59.57% of respondents were in the third year at the time of the SSC and 40.42% were in the fourth year. Students performed a variety of projects; literature review (27.96%), quality improvement/audit (24.73%), clinical (16.13%) and other (31.18%) including primary research and education. Subjects covered were varied with a significant number of students choosing areas not routinely covered in the curriculum; medical education (14.56%) and expedition medicine (6.80%). Factors considered important in determining choice of SSC were; interest in the clinical area, career aspirations and the availability of courses or trips. The best parts of the SSC experience were reported as; participating in a field trip or course, the opportunity to explore a clinical area which they may want to pursue as a career and gaining new skills. In fact the majority of students described the SSC period as having a positive impact on their career aspirations (72.92%). Qualitative feedback was largely positive with criticism focusing on the requirement for a formal written assessment at the end of the project.

Conclusions
The results from our study support the positive effects of an integral SSC programme and demonstrate a wide range of benefits for undergraduate learning. The students clearly value the opportunity to explore new areas of medicine and enjoy developing new skills, which potentially influence their career choice.

References:
Student vs Professional evaluations of PBL teaching in medicine: a comparative study

TJ Lovatt, C Gibson
TJ Lovatt, School of Medicine, Keele University, Keele, ST5 5BG

Background and purpose.
Problem based learning (PBL) is a student centred pedagogy that has both cognitive and educational goals\(^1\). Thus, students acquire subject specific information whilst they develop skills in life-long learning, for example; planning, questioning, negotiating and collaborating\(^2, 3\). At Keele University School of Medicine (KUSoM) student satisfaction scores for PBL are lower in the first year compared to other teaching methodologies (e.g lectures) and PBL scores returned in later years. Year-1 feedback implies that there are differences in approach from the PBL tutors, but it is unclear whether these differences are perceived, genuine or misunderstood\(^4\). The literature suggests that student perception of PBL facilitation is generally accurate\(^5\) but there is a paucity of studies that focus specifically on Year-1, where the PBL concept new. This study aims to compare student evaluations of tutors to those of a faculty teaching observer in an attempt to evaluate student satisfaction responses.

Methodology
A series of PBL, Year-1, teaching observations was undertaken during the 2014/15 academic year. Tutors (n=10) were provided with a personalised report and supported to reflect on their feedback. In accordance with School policy, Year-1 students completed satisfaction questionnaires that were collated into tutor reports. In this study, the faculty teaching observer will complete an identical student evaluation questionnaire (based on their prior observation) for each of the observed tutors. Teaching observation questionnaires will be anonymously matched to those of the students’ and compared. Descriptive and analytical (ANOVA) statistics will identify any significant differences between students’ and observer evaluations.

Results
These comparisons should help to elucidate the relevance of student feedback to teaching methodologies and assist faculty in the interpretation of student evaluations for PBL. Further, it may provide definitive information about which specific aspects of tutoring are more highly valued by Year-1 students. It is anecdotally discussed that Year-1 students may provide higher feedback scores for PBL tutors who indulge in didactic teaching as they are more familiar with this methodology.

Conclusions
Whilst there is a system of peer-review in operation within the school the majority of tutor evaluations are via student satisfaction questionnaires. This study will help to clarify whether Year-1 students appreciate the value of self-directed learning and if their feedback can be considered accurate\(^6\). Discussion will focus on which interventions may promote student engagement with the PBL methodology and lead to improved student satisfaction (and perhaps learning) in Year-1.

References
Students’ views about having a Peer Problem-Based Learning Tutor

S Nagraj, S Miles, P Bryant.
S Nagraj, Clinical lecturer in Medical Education, Norwich Medical School, University of East Anglia, Norwich. NR4 7TJ. UK.

Introduction
There exists a sound evidence base for the benefits of Peer Assisted Learning, both in terms of its efficacy and benefits for peer tutors and tutees. At the Norwich Medical School, University of East Anglia (UEA), Problem-based Learning (PBL) is one of the learning modalities for the undergraduate MBBS. As PBL has significant implications for tutor time, when an opportunity arose to involve intercalating students in undergraduate training, Peer tutors were introduced for Year 2 PBL sessions on a pilot basis in the 2012-13 academic year.

Methods
Feedback data were collected over three years (2012-2015) relating to students’ experience of multiple aspects of their PBL sessions. Student satisfaction with Peer and Staff PBL Tutors was compared using the Mann Whitney U test, in three areas: PBL Tutor Performance (6 items); PBL Group Member Performance (4 items) and Overall PBL Experience (1 item).

Results
There was no difference in student satisfaction between Peer and Staff PBL Tutors regarding Group Member Performance and Overall PBL Experience. However, on average, satisfaction with Peer PBL Tutors was significantly higher than with Staff PBL tutors for the PBL Tutor Performance items (p=0.001). Specifically, when compared to Staff PBL tutors, on average Peer PBL Tutors received significantly higher satisfaction scores regarding being interested in the group’s learning (p=0.001), giving students appropriate guidance (p=0.006), encouraging discussion (p=<0.001), and giving helpful verbal feedback (p=0.002).

Conclusion
Students are as satisfied with the performance of group members and overall PBL learning experience, and more satisfied with Tutor performance for groups facilitated by Peer PBL Tutors compared to Staff PBL Tutors. Peer PBL tutors may therefore, be an acceptable alternative to Staff PBL tutors, thus helping ease pressure on teaching staff and freeing them up to perform other educational activities.
Teaching 5th year students in the OSCE final exam revision day: the benefits and challenges for the near-peer teacher

G Burton, K El-Said Dawoud, R Parikh
G Burton, Foundation Year 2 Doctor, The Pennine Acute Trust – Royal Oldham Hospital, Rochdale Road, Oldham OL1 2JH. United Kingdom.

Background and Purpose
Near-peer teaching has the benefit of “cognitive congruence”- tutors understand the needs of junior colleagues and target teaching appropriately. Tutors are said to benefit by consolidating knowledge but may be challenged by lack of teaching experience. We wished to explore whether this was the case for teachers on our annual near-peer “finals” OSCE revision course, to inform the preparation of next year’s tutors.

Methodology
The revision course consisted of 15 OSCE stations. We recruited junior doctor tutors for each station (a total of 17 foundation trainees), who each completed a qualitative questionnaire exploring:
1. How they used their OSCE experience to connect with students
2. Personal benefits of teaching near-peers
3. Perceived challenges of teaching
4. What they learnt about teaching and how they would approach further sessions differently. The above data was correlated with the anonymous feedback provided by the students.

Results
The tutors felt they connected with the students. They utilised their own experiences to engage learners and focus the teaching. Tutors who had not trained locally (Manchester) felt less “connected” and less able to answer OSCE specific questions. This was echoed in the comments of the 5th year students. The most commonly reported benefits included revision and consolidation of knowledge. The course also provided “taster” teaching experience and an opportunity to develop teaching skills, as well as “improving the CV”. Challenges included little prior teaching experience and concerns regarding their perceived knowledge and clinical experience. Teaching skills (e.g. giving feedback and controlling group dynamics) were areas where tutors felt they needed further development. Interestingly, their students felt the teaching was correctly pitched and that tutors were knowledgeable and provided useful feedback. The stations were reported to have been delivered, planned and executed well. Tutors reported improvements in session planning - specifically structure, preparation of materials and time keeping. These formed the basis of potential changes for future teaching sessions.

Discussion and Conclusions
Near-peer teaching is beneficial for both learners and tutors. Tutors gain through consolidation of knowledge but also through practical teaching experience. The challenges highlighted by tutors were not echoed by the learners - specifically concerns regarding knowledge and inexperience. The “nearness” of the match between learner and tutor is not just chronological: tutors who graduated elsewhere were perceived as “less connected”. Faculty development should reflect this and provide targeted information and training to tutors to overcome this.

References
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The “Breakfast Club”: so much more than croissants. Evaluation of an innovative undergraduate medical education scheme at Nottingham University Hospitals NHS Trust

PI Ehilawa
PI Ehilawa, Teaching Fellow, Nottingham University Hospitals, NHS Trust.

Background and Purpose
The Nottingham Breakfast Club (BC) scheme, adapted from the Pinderfields model1 was implemented in 2014. The BC initiative creates a platform for University of Nottingham medical students on clinical placement to receive bi-weekly supplementary teaching between 08.00 and 08.45AM. Free breakfast is provided. Teaching is delivered by junior doctors who receive student feedback and debrief from an observing educator. Despite the seeming appeal of near peer teaching, how valuable is BC?

Methodology
Retrospective study of BC teaching for third and final year medical students at Queens Medical Centre campus from March 2014 to November 2015 was performed. Data was extracted from electronic and paper records including student evaluation forms. Students were asked to rate each session using a 5 point Likert scale, 1 = strongly disagree and 5 = strongly agree.

Results
A total of 751 evaluation forms from 95 teaching sessions were analysed. 7.4% incomplete or missing data was excluded from analysis. Overall attendance ranged from 11% - 100% (mean 51%). The mean attendance per session was 9 students (range 3– 20), 93% of whom completed evaluation forms. Mean scores for ‘enjoyment’ and ‘relevance’ of session were 4.57 and 4.77 respectively, ‘encouragement to participate’ and ‘usefulness of session’ scored 4.68 and 4.66 respectively. Qualitative feedback was overwhelmingly positive, with constructive suggestions on ways to improve the sessions. Teaching was mostly delivered by a small cohort of returning foundation doctors and core trainees.

Discussion and Conclusions
Students benefit from additional teaching via BC. Near-peer teaching by junior doctors provides a framework for new learning to be easily contextualised2. The sessions rated highly for relevance and usefulness. The results also suggest that junior doctors adopt interactive teaching styles which encourage student participation. BC does not disrupt ward commitments which creates favourable conditions for junior doctors to develop as educators; feedback stimulates reflection and encourages innovation in teaching methodology.

Despite the above advantages, attendance is suboptimal; teacher and observer recruitment is time intensive. Low attendance may be due to some topics being perceived as less important. This can be overcome by encouraging students to play more active roles by pre-identifying gaps in their learning which will inform the content of future BC sessions. The next steps are to develop standard learning objectives for near-peer teachers and pilot third year peer-peer teaching delivered by medical students who have recently completed finals examination.

References
The design and evaluation of an undergraduate teaching skills course for medical students

A Chu, N Salooja
A Chu, Imperial College London, Faculty Education Office, Reynolds Building, St Dunstan’s Road, London W6 8RP

Background and Purpose
The General Medical Council (GMC) recommends that all undergraduate medical students are taught how to teach1. However, there is little guidance in the literature of how to design and structure a teaching skills programme for medical students. Furthermore, a recent review highlighted limited feedback and subjective self-evaluation in previously published programmes2. At Imperial medical school, a one-week (5-day) teaching skills course for penultimate-year students has been compulsory since 2010 and addresses some of the limitations identified by others above.

Methodology
The course design is centred round two main practical teaching tasks: a near-peer bedside teaching session on day 2 and a classroom-based peer teaching session on day 5. Students receive formative written and verbal feedback from faculty and peers for both practical activities. Nine sessions on educational theory are used to support these activities and are delivered on days 1 and 3. Topics include: feedback, clinical reasoning, teaching a practical skill, reflection, assessment, evaluation, large group teaching, small group teaching and learning styles. The course is supported by an iBook. The course includes several layers of evaluation3. At the most basic level students numerically self-rate their confidence before and after the course (reaction). Written concerns about teaching before and after allow self- and tutor evaluation of attitude shifts. Review of written reflective work and observation of peer-teaching on day 5 allows faculty to evaluate teaching by reviewing students’ ability to put learning into practise (‘application of learning’).

Results
Students commonly start the course with concerns about their personal knowledge base, but are more concerned about education principles, such as learner engagement and feedback towards the end of the course. Faculty observation recognises that students are successful at engaging their audiences, embracing interactive teaching methods and managing information into bite-sized chunks. However, common areas requiring improvement are time management, using an inappropriately didactic style for small group teaching and dealing with questions.

Discussion and Conclusions
Long term outcomes are required to validate the value of ‘Student as teacher’ courses. However, multiple layers of evaluation demonstrate constructive alignment in this one-week teaching skills course for medical students. The useful high level evaluation process allows course evaluation and informs course development. By incorporating a balance of educational theory and practical activities, the structure and contents of this course could be used as a framework for teaching training in medical education.

References
Introduction
Year 2 medical students undertake an Early Clinical Experience (ECE) visit in General Practice interviewing a patient with a disability in their own home. Quality Assurance (QA) evaluation from 2014-15 showed good levels of satisfaction but free text comments suggested improvements could be made to prepare students to interview such patients and enable GP tutors to facilitate discussion around disability and discrimination. This study aims to look at the impact on student satisfaction with the addition of an information sheet to address the issues raised.

Methods
Learning outcomes for the visit included looking at the impact of disability on a patient’s everyday life, considering the different types and definitions of discrimination. A leaflet for students and tutors was devised covering these specific areas, and also guiding students on questions to ask patients. There was also reference to sources of information for further reading. The document was added to the tutor and student handbook and uploaded to the ECE website. QA evaluation was repeated the following year.

Results
The disability information sheet was published in October 2015. Evaluations were received from 274/345 (77.97%) students for this visit in 2014-15 and 217/376 (69.1%) in 2015-16. In 2014-15, the average overall satisfaction score was 4.28 out of 5 compared with 4.32/5 in 2015-16. The sentence “I have increased my understanding about discrimination that a patient with disability might face” scored the identical score of 4.1/5 in both years 2014-15 and 2015-16.

Discussion
The information was promoted to students and tutors and positively received by tutors. The introduction of a disability information sheet has not shown an increase in scores of student satisfaction. We plan to revise the content and delivery of the document in the future to improve impact.
The Impact of Teaching Fellows in a Paediatric Hospital- Review of Student Feedback

S Scales, S Evans, F Parker, C Van Lennep
S Scales, Clinical Learning Centre, Royal Victoria Infirmary, Newcastle upon Tyne, NE1 4LP

The Great North Children’s Hospital (GNCH) is part of the Newcastle upon Tyne Hospitals NHS Foundation Trust and is closely linked to the MBBS programme of Newcastle University. In each academic year, four cycles of students undertake a rotation in Child Health. Previously student feedback has been varied and consequently the Trust has employed four designated teaching fellows to improve student experience in Child Health. The Teaching Fellows are all post-Foundation Programme doctors, have an interest in paediatrics as a career and are actively involved in the development of the student experience at GNCH. As part of these roles, each Fellow has or is undertaking professional qualifications in medical education allowing expertise in the structuring of knowledge transfer¹. This ensures that medical education delivered is evidence based with focus on key themes, rather than indiscriminate delivery of facts¹.

This review looks at the feedback received from the Stage 5 students of 2014 and 2015. Students completed online feedback forms provided by Newcastle University. Students were asked to rate 5 areas of the rotation (facilities; organisation and induction; delivery of scheduled teaching; learning environment and support; feedback and assessment). Finally, they were asked to provide a response to “How would you rate the quality of the placement overall?” The results are compiled by the University to analyse student satisfaction.

Since the employment of Teaching Fellows in August 2015, feedback obtained from the students shows an overall improvement in satisfaction. Satisfaction ratings for quality of the placement overall in 2014 were 88%, 40%, 43% and 27% for the four cycles of students. In 2015, once Teaching Fellows were introduced, equivalent responses were 88%, 100%, 100% and 100% for the respective 4 cycles of students. Comments included

“…teaching fellows were excellent always available to help and give feedback”

“The use of teaching fellows was excellent, I feel the placement would have been a lot less useful without”

By employing teaching fellows, the Trust has created an improved infrastructure² for Child Health teaching. This dedicated teaching team creates a high quality learning environment. This has been achieved through focusing on the hierarchical needs³ of students and their learning outcomes as opposed to teachers imparting their specialist knowledge arbitrarily⁴. The overall impact of this could be assessed in the future, by comparing student attainment of those placed at GNCH year on year⁵.

References
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Paper withdrawn
The quantity and quality of feedback obtained by Manchester Medical Students during Rheumatology and Orthopaedics.

J Oldbury, B Sanderson, P Watson
P Watson, pippa.watson@uhsm.nhs.uk, University Hospital of South Manchester, Southmoor Road, Manchester, M23 9LT

Introduction
Feedback is the cornerstone of effective clinical teaching [1] allowing students to improve by reinforcing good practice and improving poor practice. The four week Rheumatology and Orthopaedic placement for the University of Manchester medical students requires them to take a minimum of 12 case histories, at least four of which must be presented to clinicians to obtain feedback. Our aim was to determine the quantity and quality of feedback currently being obtained during this placement.

Methods
A questionnaire survey of 4th year medical students studying Rheumatology and Orthopaedics at the University Hospital of South Manchester was performed to review clinical history taking and feedback during this module. It consisted of 13 questions designed around the four levels of training evaluation described by Kirkpatrick’s evaluation framework [2]. It was given to two cohorts of students on the day that they completed their Rheumatology and Orthopaedics block.

Results
26/42 (62%) of students responded to the questionnaire, of which 16 students (62%) either agreed or strongly agreed that it was easy to find patients from whom to take clinical histories during the placement. However, 30.7% of students reported not achieving the minimum of 12 case histories required. 42.3% of students agreed that it was easy to identify staff from which feedback could be sought, and 53.8% received feedback for at least four clinical histories. Almost all of the students (96%) agreed that feedback was useful. The content of the feedback varied greatly, with very few students receiving feedback covering positive and negative comments as well as ways to improve (Orthopaedics 19.2%; Rheumatology 31.7%). Feedback varied in length of time with 65.4% taking less than five minutes, 19.2% lasting 5-10 minutes and 11.5% lasting 11-15 minutes.

Discussion
Our survey demonstrates that there are some issues with the current system for facilitating student history taking, and obtaining feedback on this. The vast majority of feedback received is perceived as useful. Approximately half of students are not achieving the amount of feedback that they should receive, hence students are potentially missing out on an important opportunity to improve their clinical performance. Considering the results of this survey the authors plan to develop an intervention to try to increase the quality and quantity of feedback given, similar to the feedback postcard project being piloted in Edinburgh [3], which seems on track to improve both the quality and quantity of feedback during clinical placements.

References
The Teaching and Learning of Situational Ethical Judgements; a Learning Experience.

McInerney M, Fisher J, Burnett K E, K E Burnett, Associate Foundation Programme Director Salford Royal Foundation Trust and Honorary Senior Lecturer University of Manchester. Department of Medical Education, Mayo building, Salford Royal NHS Foundation Trust, Stott lane, M6 8HD

The Foundation Programme (FP) Situational Judgement Test (SJT) is used in the ranking of applicants to the FP to measure the applicant’s compatibility with the national person specification (1). The 2015 Technical Analysis Report of the FP SJT concluded that candidates would benefit from learning about the SJT to help perceptions of its fairness (2).

At Manchester University Medical School an online classroom was provided for discussion of ethical situations, to help students learn about Good Medical Practice, and ethical decision making, in total, 450 final year medical students and 23 tutors participated in this project, with tutors being recruited from junior and senior medical grades in primary and secondary care.

Fifteen questions were delivered over 12 weeks at www.piazza.com, resulting in 43 discussion contributions. A summary of the discussion was made at the end of each question period, with a recording of the number of daily views made by students. The number of daily student views ranged from 1 to 55. Three students in total contributed to the discussion classroom.

Students and tutors gave feedback on the project, and completed reflection for their own personal development. Qualitative analysis of these reflections demonstrated that this learning process was associated with positive emotional content in addition to an increased willingness to participate further in future debates. Foundation doctors believed it helped them develop as clinical teachers and as professionals. Specifically, they critiqued guidance and used this knowledge base to debate the ethical situation, which created positive interactions between senior and junior doctors.

Students lacked confidence to contribute to the open forum, but reported they learnt from reviewing and reflecting on the comments made by tutors. They associated mostly with posts made by the Foundation doctors and requested more SJT questions over a longer period of time in the future. It is recommended that the platform is used again with an increase in frequency of questions posted and over a longer time period. Allowing students to post into the forum anonymously may help improve their confidence in contributing.

Key Take Home Messages
Near peer assisted teaching and learning of situational ethical judgment is paramount to its success. Mindfulness to the process of the teaching and learning of SJT can improve depth of learning by allowing self-feedback and reflection. Online platforms for open discussion of situational judgement supports learner centred education and contextual understanding about the SJTs. Online platforms allow a valuable teaching and learning classroom for a large cohort of students using minimal faculty staff members.

Referencing
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The Use of Online Case-Based Materials In the Teaching of Neuroanatomy to Undergraduate Medical Students

L A Brammar, M Gatumu
L A Brammar, 4th Year Medical Student, Faculty of Health Sciences, First Floor South, Senate House, Tyndall Avenue, Bristol, BS8 1TH, United Kingdom

Introduction
Case Based Learning (CBL) is a learning style that delivers knowledge in the context of a real-life scenario (1). CBL has been widely adopted among medical schools despite a variable body of evidence supporting its use. Furthermore the delivery of anatomy teaching in the pre-clinical setting is increasingly challenging in an expanding medical curriculum with limited teaching time (2). While previous studies have analysed preference for CBL (3) along with its effects on student motivation (4) and impacts on clinical learning (5), few studies have explored the pre-clinical student’s thought processes and approaches to learning material during these exercises. The present study investigates the effectiveness of CBL using an online case-based tutorial to teach the anatomy of the cerebral blood supply and major motor pathways in the clinical scenario of a cerebrovascular event. Further, we present unique insight into the approaches student’s take to learning anatomical knowledge at a pre-clinical level. We also provide unique insight into how CBL informs student’s reasoning for answers and acquisition of core knowledge.

Methodology
A total of 36 undergraduate preclinical medical students completed a LIKERT questionnaire, which explored the use of resources and preference for or against CBL. 22 of these students took part in an entirely self-directed online CBL tutorial in the neuroanatomy of stroke on a voluntary basis. Students were assessed using an identical quiz before and after the tutorial, but asked to explain their answers in a free text format following the tutorial.

Results
Students’ average score improved significantly from 55.18/100 to 88.18/100 following the CBL tutorial (P<0.001). The greatest proportion of student’s explanations for answers showed knowledge was attained directly from the tutorial (61/150 responses). Students also indicated using deductive reasoning, possibly using knowledge gained from the tutorial (57/150 responses). From the LIKERT questionnaire, students showed a strong preference for CBL. The most popular learning resources utilised by students included unit handbooks but more interestingly, resources like e-tutorials, practice questions and websites which are media of instruction or form components of online CBL.

Conclusions
CBL is an effective teaching strategy for undergraduate neuroanatomy teaching. CBL can help student’s attain knowledge in a clinical context and is popular with medical undergraduates. In preparing for their anatomy teaching, students access a wide variety of resources but handbooks developed specifically for units and resources that are similar to the ones that are used in CBL are popular.

References
Time to Save a Life? A new escape room game to educate medical students on collaborative working and critical thinking.

J Hawkins, C Earnshaw, Z Hossenbaccus, YYS Ho, P Davies, CD Rodd
J Hawkins, Clinical Teaching Fellow, Gloucestershire Academy, Gloucestershire Royal Hospital, Great Western Road, Gloucester, GL1 3NN

Background and Purpose
Real life escape room games numbered 2800 in 2015\(^1\) and are increasingly used to develop collaborative team working in an active, fun, immersive experience. The active gameplay promotes investigative and higher level critical thinking\(^2\) and is consequently being brought into classrooms.\(^3\) Doctors are expected to work collaboratively with colleagues\(^4\) to investigate and diagnose conditions. However, we have noted that medical students on placement, although having a collective sense of peer unity\(^5\), can struggle to integrate into new teams and learn about critical clinical thinking.

We have developed a new medical escape room game to promote medical student team working, clinical skills and critical thinking in a fun, active and immersive way. The portable setup is tackled against the clock with physical and mental challenges, involving sequential and meta-puzzles, that are set in a clinical situation with the premise - could you save a life in time?

Methodology
Research was undertaken by the Gloucestershire Academy into game design and implementation before the setup, puzzles and clinical content were developed.
An observational pilot study was conducted on clinical medical students prior to a main cross over study on students transitioning into undergraduate clinical medicine later in the year.
Participants were invited and randomly assigned to teams to complete the escape room.
Evaluation was undertaken via open space and Likert based questionnaires about their perceptions of the teambuilding, enjoyment, clinical skills and content. Follow up evaluations were completed to reassess these perceptions after time spent working together during the course.

Results
The game experience will be described and full results of the study will be presented and discussed.

Discussion and Conclusions
Team work and collaboration is essential for present and future doctors alongside critical, investigative thinking about clinical situations when under pressure. It is crucial that medical students begin developing these skills early. Our escape room game is an active, immersive experience which is not only fun but formative.

References
To simulate or not?

E Bruce, P Watson
P Watson, pippa.watson@uhsm.nhs.uk, University Hospital of South Manchester, Southmoor Road, Manchester, M23 9LT.

Background
There is good evidence that simulation training can promote amongst other things clinical skills and team work [1]. On the basis of this emerging evidence, and positive feedback from undergraduate students exposed to simulation teaching at the University Hospital of South Manchester we decided to pilot simulation teaching in an area where it had not previously been used; 4th year Orthopaedics and Rheumatology (O and R).

Method
In our simulation centre we have a high fidelity human patient simulator which can talk and breathe. Two relevant topics were selected: septic arthritis and open fracture. Scenarios were written using our standard layout and included; learning outcomes, facilitator and student briefs, information for the patient and nurse in the scenario, set up and debrief instructions. A pilot was performed with 8 students who signed up to take part during the O and R block. We collected feedback immediately after the pilot session via a questionnaire survey.

Results
All 8 students provided written feedback on the session. This included rating the scenarios on a scale of 1-10 (1 = poor, 10 = excellent) in the following areas; usefulness, content/relevance and teaching as well as an overall rating. We also collected free text answers to questions: were there any good points? what could we improve on for the future?, and asked whether or not students would recommend that it was offered to all students rather than as a sign up only. The average results were as follows; usefulness 9.8, content/relevance 9.8, teaching 9.7 and overall rating 9.5. Written comments were analysed for themes which included that it was; enjoyable, realistic and relevant as well as multiple requests for more scenarios. All 8 students indicated that they would recommend it for all students in the next block.

Discussion
This pilot study suggests that simulation teaching may successfully be expanded to areas of the curriculum where it has not traditionally been used such as Rheumatology and Orthopaedics. It has been shown to be a useful and enjoyable learning tool. The scenarios are being rolled out to all 4th year O and R students at the University Hospital of South Manchester students this academic year (more feedback will be collected including evaluating any effect on confidence managing these conditions). Future work is needed to determine whether this translates into improved patient outcomes in this and other situations.

[1] In situ simulation as a tool for patient safety: a systematic review identifying how it is used and its effectiveness
Tomorrow’s doctors, today’s researchers: a pilot study of incorporating primary research in medical education

A Loizidou, J Hapeshi, P Fletcher
A Loizidou, Medical Student, Gloucestershire Academy, Gloucestershire Hospitals NHS Foundation Trust, GL1 3NN

Background and purpose
Tomorrow’s Doctors need to be more than clinicians; they need to be professionals, managers, teachers and scholars. The medical school’s curriculum needs to be adapted to facilitate this. The GMC requires that for a standard five-year course 25-33% of the medical curriculum should be available for student-selected components (SSC). This is an opportunity for “students to study in depth areas of particular interest to them”, to improve their skill-set and consider potential career paths. During the recent curriculum review at the University of Bristol it was identified that there was a need to expand the existing options for SSC to include primary research. Acquiring experience in research was paramount for medical students’ education but was very difficult for students to acquire outside the course. A pilot study was carried out at Gloucester Academy to assess the feasibility of introducing primary research in year 3 external SSC.

Methodology
Two students applied to carry out independent research at Gloucestershire Academy. Each was allocated a university and an on-site supervisor who helped the students design and carried out a four week primary research project as part of their external SSC. One student collaborated with the Research and Development Department carrying out a lab-based quantitative study. The second student collaborated with a clinical team carrying out a patient-centred qualitative study. At the end of the four weeks the students produced a 3000 word report of the study and their experience, reflecting on the difficulties they faced and the skill-set they acquired. This was taken into consideration in the most recent curriculum review.

Results
Study results will be presented and discussed at ASME 2016. Student researcher’s reflections, thoughts and personal skill assessment will also be presented.

Discussion and Conclusions
We know that research equips medical students with insight to recognise and address areas of uncertainty, teaches them skills of collaboration and communication in a multi-discipline environment, and encourages the development of self-directed learning and time-management; all essential attributes for future doctors. We also know that students want to carry out research but have few opportunities if they have not intercalated and there is no option in the medical curriculum. Thus it is imperative that the option to carry out primary research as part of SSC is provided, and even more importantly that it is encouraged.

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Tools to support early student personal and professional development on a graduate entry medicine programme - peer feedback and Myers Briggs personality type indicator with evaluation

Hussain H, Mahmood A, Nesbitt C, Parr SJ, and Marshall BG.
Marshall BG, Consultant Physician and Honorary Senior Lecturer, Faculty of Medicine, Highfield Campus, University of Southampton, SO14 1BJ

Background and Purpose
A facilitator led tutorial system for Graduate entry medicine (GEM) students at the University of Southampton underpins the first two years of study (Graduate groups). These sessions take place twice a week, and use a framework of learning outcomes to structure learning, based on the philosophy of small group teaching methods. An on-line peer feedback tool has been developed for students to complete at the end of each semester. In addition, opportunities are provided for students at the start of the second year to complete a Myers-Briggs Type indicator question book and receive dedicated guidance from experienced trainers. The aim of this study is to identify whether there were benefits from these interventions on the personal and professional development of GEM students and whether these interventions are acceptable and of value to students.

Methodology
Using individual semi-structured interviews and focus groups, information will be obtained from GEM students on the suitability of these interventions and how these interventions shaped professional behaviours, learning and interpersonal skills in graduate groups. Separate explorations into the reasons why students took up or declined MBTI testing and compared performance in graduate group work through analysis of formative facilitator and peer feedback will be undertaken.

Results
An early pilot of the peer-feedback tool in a year 2 cohort resulted in only 17 of 40 students providing feedback. Modifications of the survey tool were then made based on this feedback prior to the start of the full study. An introductory workshop was designed for students, to provide detailed information on the peer feedback tool and MBTI questionnaire to year 2 students.

Following this session, 20 of 38 year 2 students completed the MBTI instrument and underwent subsequent feedback with trained facilitators. Focus groups and semi-structured interviews are underway and the results of a full analysis will be presented, including a performance comparison between students completing the MBTI and those who did not.

Discussion and Conclusions
The initial results demonstrate an on-line peer feedback tool is simple to design and acceptable to students but requires student engagement to provide a complete dataset. The introduction of a MBTI instrument for year 2 GEM students has been made feasible through an established link with the clinical academy of our University Hospital. Student focus groups have been designed to explore the acceptability of these interventions and the impact on subsequent learning, as well as to identify reasons for non-engagement.

References
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Using multidisciplinary simulation to evaluate how fourth year medical students perceive the scope of paramedic practice

JA McDonald, JE Hambidge, A Woodman, KA Else, M Natarajan
JA McDonald, Swindon Academy, Great Western Hospital, Marlborough Road, Swindon, SN3 6BB

Background
Reflection on our own experience suggests that medical students have very limited understanding of the role, and scope of practice, of paramedics with most dramatically underestimating their skills. Appreciation by doctors of what paramedics can achieve in the pre hospital and Emergency Department setting may enhance patient care by raising the profile of their abilities in terms of diagnosis and management leading to more efficient continuation of care. We wanted to explore whether our own reflections hold true amongst a cohort of current medical students.

Method
Using the simulation facilities and hospital grounds at the Great Western hospital we will be offering half day simulation sessions to senior paramedic students (n=6) and fourth year medical students (n=6). This will be on a voluntary basis and we plan to run this on four occasions in 2016. Each session will include two emergency scenarios which will be repeated on each occasion. These will consist of a pre-hospital component with continuation of the scenario in the simulated Emergency Department (ED). Three paramedic students and three medical students will be expected to participate in each individual scenario. We envisage the paramedic students actively participating in the initial management, extrication and transfer. On arrival in the simulated ED, handover of the patient will occur and management will continue with both medical students and paramedic students participating in line with their normal practice.

Results
Data will be collected from 24 fourth year medical students and we plan to evaluate the medical student’s perception of the scope of paramedic’s practice by the use of pre and post scenario questionnaires. These will explore how the students perceive the extent to which paramedics are able to diagnose acute disease, perform advanced life support, prescribe and administer drugs, interpret electrocardiograms and to perform specific interventions.
A ten point Likert scale will be used, for each question, and we intend to test for statistical significance between the pre and post intervention data. We hope that this study will demonstrate that medical students could benefit from formal inclusion of paramedic ‘ride along’ shifts, in their standard curriculum, to better inform them of the scope of paramedic practice.
Using technology enhanced learning to improve medical students’ understanding and application of public health principles to clinical practice

E Fillmore, J Hearn, H Jenkins, B Kumaravel
B Kumaravel, Honorary Senior Clinical Lecturer, The University of Buckingham Medical School, Hunter Street, Buckingham, MK18 1EG

Background and Purpose
The University of Buckingham Medical School is a new Medical School committed to having an integrated curriculum, using a longitudinal approach based on the application of subject matter into clinical practice. The school is keen that students graduate with a strong understanding of public health concepts and their relevance to clinical practice. In 2015, feedback at the end of the public health unit suggested that while students grasped public health principles, they were unsure of the relevance to clinical practice. This is not unique to our students, as evidence points towards medical students worldwide having an inadequate grounding in public health. Research has shown that technology enhanced learning offers learners control over content, pace of learning, learning sequence, and allows students to tailor their experiences to meet course learning objectives. We aim to determine the impact of the use of technology enhanced techniques to support students to move beyond a simple understanding of public health onto a deeper comprehension and application of this knowledge to improve patient care.

Methodology
Technology enhanced learning will supplement face-to-face teaching and we will incorporate reusable learning objects (RLO) for the students to use at their discretion. RLOs can facilitate student engagement and learning. Their use will primarily focus on helping students understand how applying public health principles in practice can improve patient care. The RLOs will consist of the following: first, all lectures will be recorded, and audio recordings posted online for students to access during their self-directed learning time; second, a series of integrative case studies with quizzes will be made available online; and lastly, in-class audience polling will be carried out during lectures on relevant concepts using Participoll on students’ individual iPads.

Results
Both quantitative and qualitative data will be collected via a Likert based student survey administered both before and after the unit. Survey questions will assess students’ understanding of the relevance of public health to clinical practice. Furthermore, qualitative data will be collected in the post-unit survey to explore students’ perceptions of the use of technology enhanced learning, preferences of RLO type and to understand the impact of the RLOs on their ability to apply public health principles in clinical practice.

Conclusions
Results will be used to inform future unit design and teaching structure, and to explore how technology enhanced learning can facilitate students' understanding of relevant public health principles in clinical practice.

References
Utilising ‘Red Flag’ Ideology to Encourage Community Pharmacy Service Provision

C Ratneswaran, J Mushtaq, D Vamathevan, TK Khong
C Ratneswaran, St George’s, University of London, Tooting SW17 0RE

Background and Purpose
An increasing primary care resource burden within the National Health Service exists. New Royal Pharmaceutical Society Guidelines\(^1\) suggest pharmacists should play greater roles in managing chronic stable patients in the community. To undertake this safely, they must be able to identify patients with life-threatening symptomatology. ‘Red flags’ are used by clinicians to reliably identify symptomology indicative of serious pathology \(^2\). A similar structured approach will be needed by pharmacists in the future.

Methodology
A 3-day ‘red flag’ course covering major cardio-respiratory symptoms was embedded into a 3rd-year MPharm curriculum. The course included lectures, examiner and actor simulated history-taking practicals, and, a formative history-taking assessment. Following the initial lecture, which focused on recognising ‘red flag’ features from a clinical history, students were assessed within the small group practical using a standardised mark-sheet. Results from sessions relating to the symptom of chest pain are presented.

Results
A total of 88 students completed the pre-course questionnaire. In students attending the chest pain practical (n=48), a greater proportion were able to rule out underlying emergency cardiac causes (77% during vs 46% prior to the practical session, \(p<0.001\)), respiratory (81% vs 41%, \(p<0.001\)) and gastrointestinal (79% vs 33%, \(p<0.001\)) causes of chest pain. Overall 79% of students reached the correct diagnosis.

Discussion & Conclusions
If pharmacists are to be safe in managing chronic stable patients in the community, they will require the skills to recognise acute-on-chronic presentations. A focused course incorporating small group clinical scenarios embedded into an MPharm curriculum can provide these skills.

References
Paper withdrawn
What do Medical Students find useful on Clinical Placement?

H Thursby, R Kirby
H Thursby, Clinical Teaching Fellow, Clinical Education Centre, Keele University Medical School, Royal Stoke University Hospital, Stoke-on-Trent

Background
This year, Keele University Medical School has launched its curriculum update. Meetings are taking place and the new curriculum is due to be in place for first year medical students starting in August 2017. It is therefore important that we look at what we can improve upon, but that we also recognise what is working currently and make sure that is not lost in the updated curriculum.

Methods
A review was done of end of placement feedback forms from 3rd year medical students on their surgical block, from the last 3 academic years. Here, students were asked to rate on a scale of 1 to 10 how useful they found different aspects of their clinical placement. There was room left for comments about each aspect and space left at the end for general comments about their time on clinical placement in surgery. These scores were collated and the free text was reviewed and common themes were identified, with regards to what students found useful and what they wanted more of.

Results
The two types of educational activity that most students mentioned as being useful, were bedside teaching and attending clinics. For both of these areas, students liked that they were getting chance to practice history taking and examination skills. Several students also commented that they liked being able to interview patients and then report back to the consultant, as it gave them some independence and a sense of purpose in clinic. With regards to bedside teaching, students also commented that they felt the curriculum was well covered in bedside teaching which they found useful. It comes as no surprise then that the activities most students wanted more of was bedside teaching and attending more clinics in different surgical specialities.

Discussion and Conclusion
These feedback questionnaires asked students to leave comments rather than asking specific questions about what they found useful. This has given us a useful insight into what students find useful whilst on clinical placement and what they would like more of, especially when looking at updating the undergraduate curriculum. This data should also be transferrable across other specialities, as bedside teaching and attending clinics are educational activities available in most specialities.
50 years of Medical Education:
Historical Perspectives, Future Directions.