Oral Presentation Abstracts by Theme/Category

Sir John Ellis Student Prize 2017
Life after medical school: Why don’t some students intend to practise? M Martin Wednesday 21st June 2pm Alumni Auditorium

Small Grant Winner 2016 Follow Up Presentations
Medical aspirations, Parenthood and Work –Life Balance: Experiences of Doctors in Training C Leitner MC McNeill AL Allan K Mattick Wednesday 21st June 3.00-3.20pm Seminar Room 1
Facilitators and barriers to teaching undergraduate medical students in primary care: The GPs’ perspective J Barber S Park H Randles H Marshall P McDonald K Jensen R McKinley H Alberti Wednesday 21st June 3.20-3.40pm Seminar Room 1

Small Grant Winner 2015 Follow up Presentation
Medical students’ perceived utility of aligned and misaligned assistantships: A longitudinal questionnaire study SE Wells A Bullock LV Monrouxe Wednesday 21st June 3.40-4.00pm Seminar Room 1

New Leaders Award 2017
Medisense: The development of an independent, near-peer medical education community J Guckian Wednesday 21st June 4.00-4.20pm Seminar Room 1

Medical Education Travelling Fellowship 2016
Non-technical skills in healthcare education: a qualitative study comparing practices in the UK and Norway EAS Hill Wednesday 21st June 4.20-4.40pm Seminar Room 1

Joint ASME/GMC Award 2016 Follow Up Presentations
Postgraduate Category
“My role is to show them how to be me”: Junior doctor’s experiences of student assistantships as supervisors SE Wells SH Chadwick S Wentzel A Bullock LV Monrouxe Thursday 22nd June 4.00-4.20pm Seminar Room 1

CPD Category
Developing a coding tool to understand the Behaviour Change Techniques in CDP: initial findings J Hart EL Pearson E Bull L Byrne-Davis Thursday 22nd June 4.30-4.40pm Seminar Room 1

Joint ASME/GMC Award 2015 Follow Up Presentation
CPD Category
Educational development on context: Developing a regional community of practice (CoP) in psychiatry M Moffat I Cameron D Bennett Thursday 22nd June 4.40-5.00pm Seminar Room 1
Joint ASME/GMC Award 2017

Undergraduate Category
Whole simulated consultations; an exploration of their impacts in final year students’ self efficacy
M Bartlett
R Kinston
R McKinley
Friday 23 June
Alumi Auditorium
11.45am

Joint ASME/GMC Award 2017

Postgraduate Category
Evaluating a “take home” laparoscopic deliberate practice programme for sore surgical trainees
K Walker
V Blackhall
J Cleland
S Mough
P Wilson
Friday 23 June
Alumi Auditorium
11.45am

Joint ASME/GMC Award 2017

CPD Category
Life beyond workshops: building sustainable approaches to faculty development through peer observation of teaching in Primary Care
C Morris
A O’Brien
Friday 23 June
Alumi Auditorium
11.45am

Clinical Skills
How “willing” is “willing”? Peer physical examination in a diverse UK medical school
C Nath
K Shires
K Thomas
J Jones
Wednesday 21st June
3.00-3.20pm
Seminar Room 5

Communication Skills
Experience of Parallel Communications training, a novel communication skills workshop, in 342 medical students in a UK medical school
M Durve
B Clark
E Park
Wednesday 21st June
3.00-3.20pm
Seminar Room 7

Teaching communication skills to medical students in the clinical years: what do students identify as the most important learning goals?
J Millichamp
Wednesday 21st June
3.20-3.40pm
Seminar Room 7

Medical student experiences of resuscitation and discussions surrounding CPR status.
A Aggarwal
I Khan
Wednesday 21st June
3.40-4.00pm
Seminar Room 7

Continuing Professional Development
A mixed-methods study to explore the system for assuring continuing fitness to practice of Health and Care Professions Council (HCPC) registrants
P Crampton
J Illing
C Rothwell
S Corbett
P Tiffin
D Trepel
Friday 23rd June
10.00-10.20am
Seminar Room 1

Mindfulness for doctors - an effective way to improve staff well-being and development?
V Pattni
J Winterburn
E Klinger
S Oxborrow
L Cambray
S Chalstrey
Friday 23rd June
9.20-9.40am
Seminar Room 1

Translating behavioural science for continuing professional education: The Change Exchange
L Byrne-Davis
G Byrne
M Johnston
C Armitage
J Hart
Friday 23rd June
9.40-10.00am
Seminar Room 1
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<td>Inclusive medical practice: medical students' knowledge and attitudes</td>
<td>J Semlyen</td>
<td>Wednesday 21st June</td>
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<td>towards lesbian, gay, bisexual and trans (LGBT) patients.</td>
<td>G Panagiotaki</td>
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<td>PHEM: from individual SSC choice to integration within the undergraduate curriculum</td>
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<td>Creating and Evaluating the Impact of a Core Syllabus in Anatomy Education using a Delphi Methodology.</td>
<td>C Smith</td>
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<td>Health professionals and medical educators’ perspectives on how to better teach and evaluate diversity training: “We value science above the human being”</td>
<td>R Elizabeth George</td>
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<td>Use of Online Platforms to Connect and Develop Healthcare Professionals: Why bother and what works?</td>
<td>A Manley</td>
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<td>Innovative online medical education videos - the future of eLearning?</td>
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<td>Metaphors we teach by (with apologies to Lakoff and Johnson)</td>
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<td>‘Great idea’, ‘sounds scary’, I’m too busy’? Identifying the barriers in developing a staff peer observation programme</td>
<td>I Munjal</td>
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<td>How do doctors in training develop a professional identity as clinical teacher: a literature review</td>
<td>H Thampy</td>
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<td>The value of a peer learning medical education portfolio workshop in early career development</td>
<td>A Chu</td>
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### International Medical Education

**A Multinational Approach to Curriculum Design**

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### The Continuous Quality Improvement ‘Squeeze’ into the Curriculum in PA Education: A Model for Adoption in Physician Associate Programmes

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### Inter-Professional Education

**Can a Geriatrics Interprofessional Simulation for Medical and Nursing Students Change Attitudes to Interprofessional Learning?**

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**Interprofessional Education as a valued integral part of undergraduate placement Primary Care Learning**

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**Benefits and Barriers to Interprofessional Learning between Registrars and ANPs – a Qualitative Analysis**

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**Evaluation of the educational impact of multiprofessional handover**

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**The challenges of running inter-professional simulation: Learning from experience and developing a toolbox**

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**Interprofessional simulations can significantly improve pre-registration student awareness of the Physician Associate role**

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**Is Interprofessional Education an effective way to teach about patient safety?**

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**Who are you and what exactly do you do? : A prequalifying IPE strategy to improve appreciation of the multi-professional team**

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Exploring informal interprofessional student-clinician interactions in the workplace

P Crampton  T Brown  K Hood  F Kent  M Leech  J Newton  M Storr  B Williams  CE Rees

Thursday 22nd June
5.00-5.20pm
Seminar Room 11

Improving students’ understandings of ethico-legal issues in health through an innovative law-medicine PBL case

K Gilbert  P Trimble

Friday 23rd June
9.00-9.20am
Seminar Room 11

Teaching and evaluating smartphone applications: An inter-professional curriculum expansion for PA and nutritionist students

T Kindratt  S Rodder  VL Orcutt  C Koch  K McIlvaine  MA Neville

Friday 23rd June
9.20-9.40am
Seminar Room 11

Inter-professional Education: Enhancing supervision skills together to maximise learning opportunities in practice.

S Flavell  D Barleycorn  T Baker  J Hillier

Friday 23rd June
9.40-10.00am
Seminar Room 11

Transitioning into interprofessional practice: Evaluation of an Aged Care IPE innovation


Friday 23rd June
10.00-10.20am
Seminar Room 11

Patient Voice

The Backgrounds, Experiences and Attitudes of Volunteer Patients Supporting Undergraduate Medical Students at the University of Nottingham (VP study part 1)

C Sharratt

Friday 23rd June
9.00-9.20am
Seminar Room 7

Active participation of ‘real-time’ patients in undergraduate medical education

A Alao  B Burford  H Alberti  S Hrisos  D Kennedy  G Vance

Friday 23rd June
9.40-10.00am
Seminar Room 7

Patient shadowing; an educational tool to enhance appreciation of the patients’ perspective

K Mazan  A Holmes  B Martin

Friday 23rd June
10.00-10.20am
Seminar Room 7
Postgraduate Education

Development of a Teaching Module for Trainees: Managing Serious Untoward Incidents
S Sreih, S Flavell, A Duffen, E James, K Haire, A Weigert, E Fellows-Smith, J Hillier
Wednesday 21st June 3.00-3.20pm Seminar Room 9

Formal recognition of trainers: need for a Named Clinical Supervisor Agreement in Wales
K Webb, A Bullock, C Groves, AG Saayman
Wednesday 21st June 3.40-4.00pm Seminar Room 9

Can we improve patient communication and safety? Using practical training to improve Foundation Trainees’ competence at taking informed consent.
L Anderson, P Fletcher, K Benstead
Wednesday 21st June 5.00-5.20pm Seminar Room 9

Fundamental Fundoscopy: Increasing competent use of the direct ophthalmoscope in acute medicine
R Nutt
Wednesday 21st June 4.00-4.20pm Seminar Room 9

Pan-specialty, pan-regional training for transition induction bootcamps
A Humphreys, P Orchard, R Bamford, J Coulston, S Eastaugh-Waring
Wednesday 21st June 4.20-4.40pm Seminar Room 9

“Educational Advent Calendars” – Valuing our workforce at Christmas. Can combining humour and learning provide an educational opportunity in the Acute Medical Unit?
L Anderson, E Bowen, P Rimmer, E Darvil, N Al-Ali, P Fletcher
Wednesday 21st June 4.40-5.00pm Seminar Room 9

Learning through patient ‘follow-up’: A learning technique described by Foundation Year 1 Doctors working at night.
B Walker, D Gill
Thursday 22nd June 4.20-4.40pm Seminar Room 9

The lived experience of a junior doctor psychiatry placement
P Crampton, S Beattie, C Schwarzlose, N Kumar, P L Cornwall
Wednesday 21st June 4.20-4.40pm Seminar Room 12

Stop making the same mistake twice. Can case outcomes from serious incidents in a Coroner’s court, improve junior doctors learning?
P Rimmer, C Pennels, P Fletcher, K Benstead
Thursday 22nd June 4.40-5.00pm Seminar Room 9

The development and psychometric evaluation of a non-technical skills tool for medical post take ward rounds
S Pomfret
Thursday 22nd June 5.00-5.20pm Seminar Room 9

TIPS: Trainees Improving Patient Safety through Quality Improvement. A peer lead initiative delivering Quality Improvement teaching methodology to Foundation Doctors in the North West
H Baird
Friday 23rd June 9.00-9.20am Seminar Room 9
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<td>Not just another theatre checklist</td>
<td>J Hawkins, A Riccoboni, S Sen</td>
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<td>Towards an understanding of how appraisal of doctors produces its effects: A realist review</td>
<td>N Brennan, M Bryce, M Pearson, G Wong, C Cooper, J Archer</td>
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<td>Competencies in Practice - A Novel Assessment Method for Postgraduate Physician Training</td>
<td>S Quraishi, W Wade</td>
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<td>Practice Based Teaching And Learning</td>
<td>M Morgan, D Morley, B Merricks</td>
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<td>Practice makes perfect: An educational package to aid transition from medical student to doctor</td>
<td>C Pascoe, H Patel, IJ Clark, S Taylor, K Herregods, M Khatoon, M Helme, A Nikjooy</td>
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<td>Hitting the Jackpot! Could teaching medical students how to code save hospitals millions?</td>
<td>J Taylor, J Ford, J Greaves, K Jones</td>
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<td>Health Profession Students' and Faculty's Insights into Self Directed Learning and Inspirational Teaching-a Qualitative Study</td>
<td>S Manocaran, JJ Ong, A Chong, S Shyam, PG Patil, SR Sagineedu, CO Leong, A Pau</td>
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<td>S Bulford</td>
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<td>Obstetric emergencies in the developing world: does simulation training improve healthcare professionals’ knowledge and confidence in looking after patients with postpartum haemorrhage and eclampsia?</td>
<td>E Caplan, J Taylor, J Moffatt, D Majumdar, M Natarajan, B Sieniewicz, K Collins</td>
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<td>B Sieniewicz, K Collins</td>
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<td>E Sullivan, R Lindley</td>
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A resilient curriculum or a curriculum to develop resilience: how do medical students learn about managing stress and developing emotional resilience?

C Evans

J MacDonald

Thursday 22nd June

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Undermining behaviour and bullying: Are these issues encountered by medical students as well as doctors?

K Warren

K Jones

Thursday 22nd June

4.40-5.00pm

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114

Resilience workshop: can simulation be used to open a dialogue on the difficulties encountered as a foundation doctor with the aim of reducing stress and preventing burnout?

H Fuller

R Rooney

J Morgan

Thursday 22nd June

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Perceptions of cheating in a UK medical school

N Hrouda

T Roberts

Wednesday 21st June

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116

“being the youngest... female on the team can be quite intimidating”: Exploring intersecting identities, retention and success in health professions education

A Verma

C Rees

L Monrouxe

R Ajjawi

S Schofield

Wednesday 21st June

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Experiences in Wellbeing and Mindfulness Education at Warwick: a mixed methods study

S Stewart-Brown

A Feeley

M Cader

S Janjau

E Hanson

Wednesday 21st June

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For want of a better word – developing a taxonomy for the teaching and training of end-of-life care from a scoping review of UK medical literature

S Qureshi

A Dewar

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Psychometrics

Exploring the use of item statistics based on negatively marked scores and dichotomised scores

J Cockerill

M Roberts

E Gabe-Thomas

D Zahra

Thursday 22nd June

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Selection

What demographic and educational factors predict doctors’ decision to apply for General Practice specialty training?

P Lambe

M Roberts

T Gale

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Student acceptability and perceptions following experience as Multiple Mini Interviewers

N Cohen

G Whittaker

S Hussein

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A change in selection process at a UK medical school: does the Multiple Mini Interview facilitate widening participation in medicine?

R Patterson

DJ Beaney

JM Price

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Widening Access: Investigating UK School Teachers’ Understandings of Suitability for Medicine

K Alexander

J Cleland

T Fahey Palma

S Nicholson

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Teaching About Specific Subjects

A simple way to improve Foundation Year 1 Doctors’ preparedness for conducting ward rounds

J Pearce

M Redman

S Gajebasia

R Dirksen

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<td>K Hogan</td>
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<td>H Lewith</td>
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<td>Teaching, Learning &amp; Assessment On Clinical Rotations</td>
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<td>&quot;He’s one of those characters that really inspires you&quot; and &quot;If</td>
<td>J Lefroy</td>
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<td>R Kinston</td>
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Progression and retention: Are there differences between students entering via a Gateway programme and traditional entrants?
R D'Silva S Curtis J Cleland M Barker J Rowland
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Behavioural responses of first year students to a core curriculum, experiential, mindfulness course
J Hales M McCartney P Mukherjee E Hayward C Sanders J McDonald S McLoughlin
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Migrants and healthcare: educating tomorrow’s doctors for a global (and highly politicised) challenge
A Berlin
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Integrated prescribing teaching: Is there a short prescription for a chronic problem?
J Morgan
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Pastoral Care: Promoting Resilience in preparation for practice
H Boyce P Ehilawa C Sharratt F Perfect L Abbott
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The Impact of Dyslexia on Medical Students: A Mixed Methods Study
S Shaw J Price J Anderson
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Kolb for the modern day: would a mobile phone application aid medical student reflections?
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All work and no play: would establishing a collegiate culture for the University of Bristol academies improve student wellbeing?
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<td>T O'Hagan, J Fennell, J Sansom</td>
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<td>M Pallan, C Thomas, J Parry</td>
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<td>Facilitators and barriers to teaching undergraduate medical students in primary care: The GPs' perspective</td>
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<td>R Lundin, M Kopczynska, B Sharif, T Szakmany</td>
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EDC Pick and mix – innovative, interesting and prize winning work?
Thursday 22nd June 2017, 2.45pm – 3.45pm
Seminar Room 12

Time                  Page
2.45                  Welcome
                      Professor Colin Macdougall, Chair EDC

2.45-3.10 Educator Innovator Award Winners 2016
(2 x 10 minutes each)

“Take Away Body Parts”  204
C Smith, BSMS

“If story telling is central to human meaning, why, in the research world, is there not
more storytelling?”    205
L Delgaty, Newcastle

Q&A session

3.10-3.35 Abstract presentations - Innovative and interesting work
(2 x 10 minutes each)

‘Trainee perceptions of what makes a good clinical placement: a Q-sort analysis’  207
J Hampton, Cardiff University

‘Patient involvement and public engagement in UK medical education - a qualitative
case-based study’  208
A Berlin, UCL

Q&A session

Session Chair: Professor Colin Macdougall & Dr Mark Lillicrap

3.35-3.45 Update from the Psychometrics and Technology Enhanced Learning Special Interest
Groups (SIGs)

3.45 Close
Professor Colin Macdougall
ERC Best Original Research Paper Award (BORPA)
Thursday 22nd June 2017, 11am – 1pm
Alumni Auditorium

Time | Activity | Page
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11.00 | Welcome & explanation of criteria for judging presentations. Dr Anne-Marie Reid / Dr Susan Jamieson | 117

BORPA Finalists (papers in alphabetical order of surname)
20 minutes talk and 10 minutes Q&A per paper

11.15-11.45 | “Why not you?”: Discourses of widening access on UK medical school websites K Alexander, J Cleland, T Fahey Palma, S Nicholson | 209

11.45-12.15 | Patient perspectives on how to better teach and evaluate diversity education in medical and healthcare institutions: “Knowing one’s ‘self’ is the key to knowing others” RE George, M O’Reilly, N Dogra | 211


12:45-12:55 | Voting: Attendees vote individually for winner and runner-up; ERC collect voting papers for counting; winner announced later in conference. Dr Anne-Marie Reid / Dr Susan Jamieson | 

12.55pm | Close Dr Anne-Marie Reid / Dr Susan Jamieson | 


TASME Teaching Innovation and Excellence Prize Finalists 2017

Thursday 22nd June 2017, 1.45-3.45pm
Alumni Auditorium

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<td>Dr Russell Senayayake, TASME Career Group Awards Representative</td>
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**TIE Finalists** (papers in alphabetical order of surname)
*(10 minutes presentation time & 2 minutes Q&A)*

- Matthew Brown, Adam McDermott, Rhian Sheppeard, Imogen Swart-Wilson, Peter Sykes
- Ankur Khajuria
- Doug McKechnie
- Fiona Thomson

**Bursary for Professional Development**
Video Presentation
- Dr Lesley Curry

**Announcement of TIE Prize Winner 2017**

3.45pm Close
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O Gokhale
N Stafford
M Htyn
M Greamspet
M Natarajan

Setting up a programme to teach intimate examination as part of a governance strategy for NHS Trusts delivered by “lay experts”

J Taylor
K Jones

Student experiences and staff perceptions of the primary care placement in the Physician Associate programme at a UK Medical School.

R Hoggins
W Scott-Smith
M Okorie
J Price

Paper withdrawn

The readiness of second year medical students towards interprofessional learning before and after their second clinical attachment

L Ghani
A Chu
E.H Muir
A-M Salmasi

There is no I in Team: using interprofessional team based simulation to teach students about medical error.

I Swart-Wilson
D Morton
L Crossland
H Chant
R Sheppeard
M Brown
A McDermott
P Sykes
A Samuels
C Rodd
P Davies

Why develop an insitu inter-professional simulation training programme for the management of medical emergencies on the dialysis unit, in both the hospital and community units.

K Watson
A Rankin
A Moran
O Keane
C Mainwaring
T Sanctuary
S Calvert
T Lasoye

Patient Voice
What can healthcare students learn from community members’ involvement in the design and delivery of a health promotion event?

K Stevenson
S Regan de Bere
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Postgraduate Education
A constructivist designed workshop to promote confidence and allay anxieties for Foundation doctors when discussing Do Not Attempt Cardiopulmonary Resuscitation

M Ramadas
B Clark
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Sir John Ellis Student Prize Winner 2017 (Intercalated Category)
Life After Medical School: Why Don’t Some Students Intend to Practise?
M Martin, University of Lancaster

Background
The NHS increasingly appears over-stretched, with data from the General Medical Council reporting a growing reliance on ageing and overseas doctors amid rising numbers of UK-trained doctors heading abroad or leaving the profession altogether. Therefore, it has been widely cited that recruitment, and subsequent retention, of UK medical students is of growing importance. However, studies are showing that increasing numbers of medical students are instead choosing to pursue alternative careers instead of clinical practice, yet there is no clear explanation for why this trend is occurring. Given the current socio-political climate surrounding healthcare in the UK it is becoming increasingly relevant to understand these students’ career intentions and why their desire to become doctors has declined.

Aim
To explore the experiences of medical students whose interest in becoming a doctor decreases during medical school in order to improve understanding of their career motivations.

Methodology
This study took an interpretivist stance to the phenomenon, using an Interpretivist Phenomenological Analysis approach to address the research enquiries. Qualitative data was collected from semi-structured interviews with three participants from Lancaster and Newcastle Medical Schools to explore their motivations, experiences and career intentions. Transcripts of these interviews were then analysed to produce multiple themes.

Findings
Four superordinate concepts which encompassed ten themes and 32 sub-themes were produced from the data. These captured participants’ views on how their motivations to become doctors had changed, as well as the factors influencing this change. The superordinate concepts included: expanding self-awareness, expanding awareness of ‘life after medical school’, mirroring against peers and changing idealism.

Conclusions
Students’ declining motivation to become doctors appears to be related to increasing clinical experience, as well as non-clinical experiences such as non-clinical rotations, placements and intercalated degrees. The central process in this attitudinal change appeared to be the result of an interaction between: 1) a gradual divergence in students’ view of a doctor’s identity and their own self-identity, and 2) an expansion in both of these identities. Both of these processes were influenced by the complex relationship between the four superordinate concepts resulting in students instead favouring the pursuit of alternative careers. The implications of this study lie in offering personalized student support, and the need for improved awareness of the medical profession amongst medical school applicants.

Wednesday 21 June, 2pm, Alumni Auditorium
Small Grant Winner 2016 Follow up Presentation

Medical Aspirations, Parenthood and Work-Life Balance: Experiences of Doctors in Training
Leitner C1, McNeill MC2, Allan AJ3 & Mattick K3

1 Medical School, University of Exeter, England, 2 Royal Devon & Exeter Hospital, England, 3 Centre for Research in Professional Learning, Graduate School of Education, University of Exeter, England

Background
Junior doctors in the UK report that conflicts between their personal and professional life create a significant source of stress in the initial years post qualification.1 The culture and duration of medical training poses challenges for both women and men. 2,3 With fewer trainees progressing directly into UK training posts after the Foundation Programme, an increasing number of female doctors in the UK 4 and a shortage of GPs, it is important to research career decision-making. There is little qualitative research exploring attitudes towards work-life balance and parenthood in UK medical students or junior doctors and how this interacts with specialty choice, which will enable exploration of contextual factors and interactions in detail. The research question is: What are senior medical students’ and foundation year doctors’ perceptions and experiences of planning for a medical career and parenthood?

Methodology
The research was undertaken as an interpretive and collective case study of the perceptions and experiences of 28 fifth year medical students and Foundation Doctors in South West England. A purposive sampling method was utilised to maximise variation. A semi-structured 60min interview, incorporating a Life Grid 5 was the main data collection method. Interviews were audio-recorded and transcribed verbatim. Data were thematically analysed using a constant comparative method.

Results
Three main themes were identified within the qualitative data. The first theme related to the current workplace experiences of the individual and their perceptions of working conditions and culture whilst on placement or in their daily work.

The second theme related to future career planning and considerations affecting specialty choice. These included description of factors that informed their decision making process through personal experiences of clinical care, identification of role models, perception of different specialties and their training programs, and the implications for work-life balance.

The final theme presented participants’ observations about implications of the changing context in which doctors work, especially in relation to the new junior doctor contract in England.

Conclusion
Trainees’ perceptions of work-life balance, workplace culture and support in different specialties provide insights into changes that might need to occur to recruit and retain junior doctors in those specialties. This information is of importance to Universities, Specialty Leads, Training Programme Directors, Postgraduate Deans and Health Education England. These changes will need to be made promptly in order to recruit and retain talented young doctors.

References
1. Firth Cozens, J. Source of stress in women junior house officers. BMJ. 1990. 13; 301 (6743): 89-91

Wednesday 21 June Seminar Room 1, 3.00-3.20pm
Facilitators and barriers to teaching undergraduate medical students in primary care: The GPs’ perspective.
*Barber J[1], Park S[1], Randles H[2], Marshall H[2], McDonald P[3], Jensen K[4], McKinley R[4], Alberti H[4]
[1] Department of Primary Care and Population Health, University College London; [2] School of Medical Education, Newcastle University; [3] Brighton and Sussex Medical School, University of Brighton, [4] School of Medicine, Keele University

Background
Currently primary care delivers 13-14% of undergraduate medical teaching UK-wide.[1] Some medical schools are experiencing an increasing challenge to recruit GP teachers in practices facing increasing and competing demands from service and simultaneous expansion of postgraduate training. The length and quality of medical students’ exposure to primary care influences their later choice of specialty so failure to recruit and retain GP teachers threatens NHS England’s aim to increase GP numbers by 5000 GPs by 2020.[2-4] There has been no research on UK GP motivation to teach since the 1990s although some has been conducted overseas.[5-9] We seek to identify and understand contemporary motivators and barriers for primary care engagement with undergraduate education in the UK.

Methods
Semi-structured interviews were undertaken with 25 GP teachers at four UK Medical Schools including urban and rural and those using modern and more traditional curricula. Three groups of participants were purposively sampled: GPs who have recently commenced teaching in a practice or are increasing their commitment, established GP teachers and GPs who have recently stopped teaching or are decreasing their commitment. The interview schedule was developed using literature review and discussion amongst the research group. Interviews were audio-recorded and transcribed. NVIVO was used to facilitate thematic analysis of transcribed interviews using both deductive and inductive approaches. This study was funded by the ASME small grants scheme.

Results
Key motivators reported by GPs were keeping up-to-date, enjoyment, variety and promoting GP as a career. GPs perceived medical schools as facilitators through provision of prompt feedback. Teaching skills courses were cited by some as a major stimulus to commence teaching. Our analysis shows a distinction between partner and salaried/locum GP perspective on barriers to teaching related to autonomy over time and funding. Partners described a lack of autonomy due to ever increasing service demand and decreasing pay, which is insufficient to replace lost clinician time, as fundamental reasons to stop teaching. Conversely, salaried and locum doctors mentioned greater autonomy over working hours as a major reason to teach. Multiple practices have stopped undergraduate teaching in favour of postgraduate GP training because of service contribution of, and a longitudinal relationship with, trainees. Some teachers had proactively contacted medical schools demonstrating that current recruitment practices miss potential recruits. GPs suggested use of a broader range of recruitment methods such as social media.

Discussion and Conclusion
This study highlights a number of crucial factors which influence GPs’ decisions to teach undergraduates including the pervasive negative effect workload pressures and inadequate funding have on education of students in general practice. On-going lobbying by the Royal College of General Practitioners and Society for Academic Primary Care is crucial to support recent recommendations by both the 2016 Health Select Committee, and Health Education England/Medical Schools Council report, that the ‘government accelerate their work to create a payment mechanism which reflects the true cost to GP practices of teaching medical students.’[10,11] This work highlights that there is untapped teaching capacity in general practice and that medical schools must consider reviewing recruitment methods to ensure full coverage of an ever changing workforce comprising increasing numbers of salaried and locum GPs who may be excluded from current communication with practices.[12] Social media may offer solutions. A clearer understanding of the barriers and facilitators that have emerged in our study will aid medical schools to recruit and retain GP teachers for the NHS of the future.

References


Wilson, A., Fraser, R., McKinley, RK, Preston-Whyte, E. and Wynn, A. ‘Undergraduate teaching in the community: can general practice deliver?’ Br J Gen Pract. 46(409):457–460.


Wilson, A., Fraser, R., McKinley, RK, Preston-Whyte, E. and Wynn, A. ‘Undergraduate teaching in the community: can general practice deliver?’ Br J Gen Pract. 46(409):457–460.


Wednesday 21 June Seminar Room 1, 3.20-3.40pm
Small Grant Winner 2015 Follow up Presentation

Medical students’ perceived utility of aligned and misaligned assistantships: A longitudinal questionnaire study
SE Wells¹, A Bullock² and LV Monrouxe³
1. Specialist Registrar, Geriatric Medicine. Wales Deanery, 2. CUREMeDE, Cardiff University, 3. Chang Gung Medical Education Research Centre, Taoyuan City 33305, Taiwan R.O.C.

Background
Growing evidence supports the role of student assistantships in enhancing graduates’ preparedness for practice (1-8). In 2015, 52% of graduates from Welsh medical schools (n=182) undertook an assistantship placement directly aligned with their first doctor post in the Wales Foundation School. Current evidence concerning the impact of assistantship alignment on graduates’ experiences of transitioning into the workplace is limited (9).

Methods
A longitudinal cross-sectional online questionnaire study was conducted across the transition from medical student to junior doctor. Questionnaires were distributed to final year medical students within Wales (n=351) and graduates from other UK medical schools commencing their first doctor post in Wales (n=150) in June 2015 (Time 1: T1), September 2015 (Time 2: T2) and January 2016 (Time 3: T3). Welsh graduates commencing in their first post in Wales undertook aligned assistantships all other participants undertook misaligned assistantships. Questionnaire items designed to measure assistantship experiences were developed by the research team informed by the thematic analysis of a group interview study of aligned and misaligned assistantship students and their supervisors(9). IBM SPSS Statistics 20 was used to assist in the analysis of the data generated. A combination of descriptive statistics, t-tests and repeated measures ANOVA were performed.

Results
Response rates at T1 were 50% (n=251, aligned=139, misaligned=112), T2 36% (n=179, aligned=83, misaligned=96) and T3 28% (n=141, aligned=69, misaligned=72): 15% (n=73, aligned=36, misaligned=37) completed all questionnaires. Participants from both groups responded positively to statements concerning the impact of their assistantship on preparedness. At each time point, statistically significant differences between the responses for aligned and misaligned groups were observed with the aligned group awarding higher ratings to questions across a number of domains. At T2, participants who had undertaken aligned assistantships were significantly more likely to report that their assistantship experiences had reduced anxiety and enhanced their confidence at the August transition. However, paired longitudinal analysis revealed that by T3, these differences between groups had disappeared.

Discussion
Our results support evidence from existing studies of the importance of assistantships in supporting the transition of medical graduates into practice (2, 7). In addition, our results highlight the added benefit of aligned assistantships particularly in the initial period following the August transition. However, our results also demonstrate that this added value washes out over time and that rather than eliminating anxiety and lack of confidence around the transition into practice, aligned assistantships may defer this until a later point.

References

Wednesday 21 June Seminar Room 1, 3.40-4.00pm
The Problem:
For medical students and newly-qualified junior doctors, it can prove challenging to find support for medical education projects, or identify ‘like-minded’ enthusiastic individuals. This is particularly difficult for those not formally tied to an academic institution, a common scenario for foundation doctors.

The Initiative & Leadership Role
In 2015 I founded Medisense Medical Education, an independent group aiming to foster a spirit of medical education in North East England, with a focus on technology enhanced learning. Medisense grew to become a successful online platform, with over 50 volunteers from various disciplines worldwide. Volunteers have presented projects at conferences, developed quality improvement projects and collaborated with national bodies.

I aimed to empower volunteers to take leadership roles, providing ‘near-peer’ support to more junior team members. In doing so, I created an environment in which team members would be enriched by their experiences, and develop further interest in medical education. The online platform was set up as a business, so that I could be accountable for its actions and formalise links with national institutions. Moreover links were established with consultants and academics, so that Medisense volunteers would have appropriate support from supervisors when working on projects.

The Impact of the Project
Despite the obstacles of maintaining an educational sometimes across continents, and balancing projects alongside busy junior doctor rotas, Medisense has developed numerous successful projects. These include the world’s first online deteriorating patient simulator, free ‘getting into medical school’ days in order to widen participation in medicine, developing a mobile app to ease the transition between medical students and junior doctor and creating sepsis memory aid cards, which have directly improved patient care. The website has had millions of hits from all over the world, and formal partnerships have been established with Health Education England, Newcastle University and Newcastle Upon Tyne Hospitals Trust.

Medisense has allowed me to develop my leadership skills in a unique way, alongside offering opportunities for me to constantly learn from my peers and collaborators. I have developed skills in mentoring and look forward to the opportunities and challenges ahead with this medical education community.

Wednesday 21 June Seminar Room 1, 4.00-4.20pm
Medical Education Travelling Fellowship 2016

Non-technical skills in healthcare education: a qualitative study comparing practices in the UK and Norway
EAS Hill, Senior Lecturer, School of Health Sciences, University of Central Lancashire, Preston, UK

Background and purpose
Simulation provides an ideal vehicle for the development and assessment of both technical and non-technical skills (NTS) within healthcare education (1), both of which are essential for safe and effective healthcare delivery (2,3).

NTS may be defined as a set of social (communication and teamwork) and cognitive (analytical and personal behaviour) skills that support high quality, safe, effective and efficient inter-professional care within the complex healthcare system (4); the development and utilisation of these, in conjunction with clinical competencies, is essential for safe and effective healthcare delivery (2,3). NTS are recognised by the Health and Safety Executive (5) and integral to the WHO Patient Safety Curriculum (6) and there are currently Health Education England (HEE) drivers to use human factors approaches to underpin patient safety and quality improvement (7). Although a NHS scoping review identified how NTS can be developed (8) and training in NTS is rapidly becoming mandatory in numerous NHS trusts, contemporary teaching methods do not always facilitate their development in students, which potentially compromises patient safety (2). In addition, higher education providers may lack formal simulation education programmes into which they can be integrated.

The Norwegian University of Science and Technology (NTNU) is Norway’s largest university and offers a diversity of healthcare programmes; it also faces similar challenges to the University of Central Lancashire (UCLan) regarding healthcare education. However, unlike UCLan, NTNU has integrated simulated learning, and the debriefing of both technical and NTS, into healthcare programmes and has dedicated staff and protocols for delivery.

An educational visit was undertaken in November 2016 to work with the NTNU simulation education team. The purpose was to:

1. Identify methods used to teach and assess non-technical skills (NTS) to healthcare students using simulation as the method of delivery.
2. Ascertain how healthcare educators learn NTS using a focus group interview with the faculty (as part of a larger international multicentre research study, with the opportunity to recruit this centre for inclusion).
3. Observe how simulation is integrated into existing health care programmes at NTNU.
4. Assess the differences in teaching and learning between NTNU and the University of Central Lancashire (UCLan) and attempt to ascertain the reason for these pedagogical differences.
5. Identify methods of teaching and assessing NTS that would be transferable to improve curriculum design and teaching within UCLan and clinical practice and safety standards in learners.

Methodology
Over one week the author observed students from undergraduate healthcare programmes in simulation and debriefing. Unfortunately, due to the timing of the visit it was not possible to observe any formal teaching delivery. Through discussions with the simulation lead she learned how and why the simulations facilities, delivery protocols and staffing structure had been devised and how simulation had been integrated into curricula. She also discovered how the simulation lead works with programme teams in order to devise and deliver appropriate simulated education. Finally she observed how simulation staff collaborate and their participation in an ongoing process of individual post-simulation debriefing in order to develop their own facilitation skills.

Results
The main findings were:
Simulation and NTS training in the author’s institution could be fully integrated into programmes and delivered in a co-ordinated and effective manner with some simple changes to skills facilities and the creation of dedicated staff. The costs would be small.
Observations suggest that culture may influence both attitudes towards learning and professional roles and interactions, all of which ultimately affect patient safety.
There is potential for ongoing collaboration between the two institutions, to the benefit of both staff and learners.
Discussion and conclusions
Ensuring patient safety remains a priority and educating students in NTS is a vital step in achieving this. In the light of recent HEE drivers (8) it is essential to find effective ways to include NTS teaching and assessment in healthcare programmes. The NTNU model for integrating simulation into curricula would transfer well to the author’s institution and enable staff to deliver structured education on NTS. The potential impact of cultural differences and norms on engagement with NTS learning, and therefore the potential success of educational programmes in delivering these, warrants further investigation.

References

Wednesday 21 June, Seminar Room 1, 4.20-4.40pm
“My role is to show them how to be me”: Junior doctors’ experiences of student assistantships as supervisors

SE Wells1, H Chadwick2, S Wentzel3, A Bullock3 and LV Monrouxe4

1. Specialist Registrar, Geriatric Medicine. Wales Deanery, 2. Cardiff University School of Medicine, 3. CUREMeDE, Cardiff University, 4. Chang Gung Medical Education Research Centre, Taoyuan City 33305, Taiwan R.O.C.

Background:
Student assistantships are defined as “a period in which a student acts as assistant to a junior doctor, with defined duties under appropriate supervision”(1). The near-peer relationship between Foundation Year 1 (F1) doctor and student is critical to the success of this clinical placement. Research concerning assistantships has focused on undergraduates’ preparedness and there has been limited exploration of the role of assistantship supervisors (2-7). To our knowledge, no studies have explored how F1s’ personal experiences of assistantships subsequently affect behaviour when the student-supervisor role is reversed.

Method:
Thirty-five F1 doctors (22 graduates of Welsh medical schools, 13 graduates from other UK medical schools) working across 10 different hospital sites within the Wales Deanery participated in semi-structured narrative interviews. Interviews were conducted face-to-face (n=25) or by telephone (n=10) during a 3 week period in May-June 2016 concomitant with participants directly supervising final year assistantship students. Interviews were transcribed, anonymised and analysed using a thematic framework approach (8).

Results:
Three main themes were identified: 1) determinants of behaviour, 2) the role of the supervisor and 3) the student-supervisor relationship. F1-supervisors reported how their own assistantship experiences influenced their behaviour. They sought to replicate positive learning experiences and placed emphasis on preparing their students for the skills/situations for which they had felt unprepared. Participants described their supervisor role in multiple ways most commonly as teachers or mentors and identified their role as guardian of patient safety as a critical part of the assistantship programme. They also narrated undertaking a pastoral role in which they provided emotional support and sought to protect students from situations that they perceived may be damaging or discouraging. In general, participants described their working relationships with students positively, frequently citing the personal benefits of having an “extra pair of hands” to assist with their workload. Barriers to positive working relationships included time pressures and interpersonal factors. Additionally, participants occasionally recounted instances where confusion surrounding the degree of hierarchy that should exist between student and supervisor led to conflict and breaches of patient safety.

Conclusion:
Individual’s student assistantship experiences guide their actions and decision-making when they become supervisors. As supervisors, their role is often constructed as that of workplace teachers. However, their role as pastoral carers is also narrated and may be important in reducing anxiety around graduates’ transition into practice. Clearer guidance and support is needed for F1-supervisors to prevent breaches in patient safety.

References

Thursday 22 June Seminar Room 1, 4.00-4.20pm
Developing a coding tool to understand the Behaviour Change Techniques used in CPD: initial findings
J Hart, E Pearson, E Bull, L Byrne-Davis
University of Manchester

Background:
Note: This work was funded by the ASME/GMC Excellent Medical Education 2016 Award for CPD.
Health professional practice can be conceptualised as a set of complex of behaviours, which Continuing Professional Development (CPD) courses often aim to change. Therefore, understanding what drives behaviour and which of these drivers are present in a course can help educators facilitate practice change. Implementation and behavioural sciences have explored what behavior change techniques (BCTs) can be useful in changing behavior, resulting in a variety of frameworks and tools. One such framework is the 93-item Behaviour Change Technique Taxonomy (BCTT) (Michie et al, 2013). However, the application of the BCTT in changing practice behaviours targeted by healthcare CPD courses has yet to be explored. We aimed to develop a coding tool, based on the BCTT, to explore if it can be used to understand and code techniques used by educators to change healthcare practice.

Methodology:
Two behavioural scientists (trained in coding the BCTT), observed three one-two day postgraduate medical CPD courses delivered by seven sets of medical educators. Observations occurred over three months and were split into two phases. In phase one, the entire 93-item BCTT was used to code three days of observations; the number of BCTs found and inter-rater reliability was recorded. Following discussion with the project team, refinements were made and the resulting scaled down version of the framework was converted to an e-tool, using locally-developed software. This tool included only the BCTs recorded in phase one, taking into account reliability and comprehensiveness. It also incorporated space to record demographic and other information useful to educators. In phase two, the refined e-tool was used to observe a further four days across the three courses, and the researchers sought feedback on the e-tool through short discussions with an educator from each course. Following phase two, the tool was further refined and a final version produced.

Results:
Inter-rater agreement remained high throughout (e.g for observations made in phase one, Cohen’s Kappa ranged from 0.86 to 0.89 and PABAK ranged from 0.90 to 0.92. A total of 35 BCTs were identified in phase one, with three additional BCTs identified in phase two. The final e-tool comprises 38 BCTs alongside examples of each derived from the observed courses to aid their identification, since educators fed back that they would value a concise and easy-to-use tool with examples embedded in their practice.

Discussion:
Behavioural science theory and research has produced a variety of tools and frameworks to explore the impact of intervention on behavior change. This could help medical educators to understand the range of BCTs available to help them to optimize the impact that their training has on changing practice behaviours. However, existing tools such as the BCTT can require long and complex training, and be difficult and time consuming to use for those without a background in behavioural science. In order to make these tools accessible to educators, we developed an e-tool to code the BCTs commonly used by educators on three CPD courses. Developing an accessible tool to understand BCTs and their uses may empower educators and training providers to be able to include BCTs with proven efficacy and discard those that have been shown to be less useful. Coding reliability between the two researchers was high; however, it is important to note that both are behavioural scientists trained to code BCTs. Further testing of the final e-tool is necessary in order to explore its effectiveness and ease of use by medical educators.

References:
Educational development in context: Developing a regional community of practice (CoP) in psychiatry.
M Moffat, I Cameron, D Bennett
University of Aberdeen

Background:
Supporting educators in their delivery of medical training, and aiding their development, is a priority in the field of medical education. Challenges to this include supporting NHS colleagues who deliver the majority of clinical undergraduate training in addition to their own clinical care roles. Development of a “community of practice” (CoP) from existing networks may be an effective way of helping support NHS colleagues. The aim of this project was to form, and evaluate the effectiveness of, a CoP in the context of psychiatry teaching in the north of Scotland, with the hope of exploring the potential of transferring the idea onto other disciplines and specialties.

Methods:
A participatory action research approach was used around a regional training event. Qualitative methods which included semi-structured interviews of participants from the training event, reflections from the core CoP members and field notes were employed to gather data. Thematic analysis was applied to identify key themes relevant to the development of the CoP.

Results:
Sixteen participants took part in the training event and all completed evaluation forms. Six individuals consented to and took part in semi-structured interviews. All six members of the CoP, involved in organising the event, wrote reflective accounts of the process at different stages. Five key themes arose: collaboration between the sites in the region; networking; knowledge of the curriculum; emphasising student-centred delivery of teaching and encouraging reflective practice. The findings suggested that participants valued the opportunity to engage with other educators at different sites in the region and this engagement, for some, continued afterwards.

Conclusions:
We report here on the development and evaluation of a training event to support and strengthen a community of practice in psychiatry teaching. Overall, the event was well received by participants and there was some initial evidence of improving and developing collaborations and network, thereby developing the community. Participants were also given the space to reflect on their teaching practice outside of the clinical environment and service demands. This is an ongoing development and as such future events and evaluating the long term impact of developing such a community and the impact on teaching outcomes will be explored.

Thursday 22 June Seminar Room 1, 4.40pm-5.00pm
Introduction
Keele’s senior medical students undertake unobserved whole simulated consultations in primary and secondary care settings to enhance their preparedness for clinical practice. We have evaluated the pilot clinics and found that students perceived them to be an effective way to learn skills which are relevant to the work of Foundation Year 1 doctors. They identified that having to take responsibility for the whole encounter, and therefore their clinical decisions, was key to learning.

A small number reported a reduction in self-efficacy regarding their ability to work as a Foundation Year 1 doctor. We considered it important to address this from the perspective of students’ wellbeing, and because Bandura suggests that it could lead to decreased motivation to learn.

Our aim is to explore the impacts of this simulation on final year medical students’ self-efficacy.

Design and Methodology

We propose a mixed methods study to address the questions:

• Can we identify students with low or fragile self-efficacy?
• What aspects of the simulation lead to changes in students’ self-efficacy?
• How can the simulation be developed to maximize students’ self-efficacy?

Research ethics: Keele University’s Ethics Review Panel.

Quantitative data collection: We will use a validated questionnaire and scale for measuring medical students’ self-efficacy.

Sampling students: All students in the cohort will be asked to complete the self-efficacy questionnaire in the month before and then immediately after their session. We will use the scores to identify students with stable, reduced and enhanced self-efficacy.

Qualitative data collection: All students with low or reduced self-efficacy scores will be offered an individual debrief irrespective of whether they consent to be included in the study. Further support will be offered through our academic and pastoral support service. Those who consent will have a semi-structured interview. We will sample students with enhanced and stable high or moderate self-efficacy and offer a debrief interview but will only conduct this if they consent for their data to be included in the study.

Analysis: A Realist logic will be used to analyse the qualitative data. We will develop a programme theory using published literature. Interviews will focus on students’ perceptions of their experiences in the sessions and will include an exploration of the concepts identified in the programme theory. The analysis will test and refine the programme theory by identifying configurations of contexts, mechanisms and outcomes (the changes in students’ self-efficacy).

Implications: the findings will inform development of the simulation.

References

Friday 23 June Alumni Auditorium, 11.45am
Evaluating a "take home" laparoscopic deliberate practice programme for core surgical trainees

K Walker¹, V Blackhall², J Cleland³, S Moug⁴, P Wilson⁵

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² Surgical research Fellow, NHS Highland
³ John Simpson Chair of Medical Education Research, University of Aberdeen
⁴ Consultant Surgeon and Honorary Clinical Associate Professor, University of Glasgow
⁵ Professor of Primary Care and Rural Health, University of Aberdeen

Background:
Studies have shown that laparoscopic skills can be learned using portable simulators. However, trainees tend not to avail themselves of the opportunity to practice, even if given access to a suitable simulator. This was our experience in our attempt to incentivise frequent practice on take-home simulators by trainees in two Scottish core surgical training programmes.

The focus of our enquiry is a laparoscopic simulation training programme (Incentivised Laparoscopy Practice Study (ILPS)). The aim of ILPS was to quantify gains in laparoscopic motor skills of core surgical trainees using take-home simulators. The incentive was in the form of an eCertificate to facilitate access to ‘first operator’ tasks in the live theatre once online tasks had been completed. Although performances improved in some, there was poor engagement overall.

Aims:
To evaluate the barriers and facilitators to engagement with home-based laparoscopic simulators in core surgical trainees.

Methods:
We plan to conduct focus groups with the following stakeholders:
- Core surgical trainees (CSTs) who participated in the pilot study
- ‘Naïve’ CSTs working in Scotland and employed in posts that utilise laparoscopic surgery
- Consultant surgeons working in Scotland who undertake laparoscopic surgery
- Surgical Core Surgical Training Programme Directors
- Faculty of the original ILPS

The questions will be slightly different for those who have knowledge of ILPS and naïve trainers/trainees. The focus groups will involve exploring participants’ understanding of deliberate practice and their views of the usefulness of it in relation to surgical training as well as barriers and facilitators related to uptake of the programme.

Analysis:
Interviews will be audio recorded with participant permission, transcribed for analysis, and entered into NVIVO qualitative data analysis software. After thematic analysis we will move toward a theoretically-directed approach to critically analysing the data. We plan to use the data to inform the design of a future home based simulation programme.

Friday 23 June Alumni Auditorium, 11.45am
Background
It is almost twenty years since the GMC foregrounded the role of The Doctor as Teacher (GMC 1999), signalling the start of a ‘professionalisation of medical education’ agenda that has gained significant momentum. Faculty development activity has become a much more widespread across the continuum of medical education (Morris 2012), extending its developmental reach as it becomes increasingly aligned with quality assurance, appraisal and revalidation practices. For example, the GMC requires clinicians to provide appraisal evidence supporting educational roles and has raised the need for organisations to support educators to liaise with each other to make sure they have a consistent approach to education and training’. (GMC 2016).

Whilst participation in ‘classroom based’ faculty development activity has become the norm, the use of ‘workplace based’ approaches remains relatively uncommon, despite their potential to influence change in teaching practice and learning culture (Steinert 2016). Our study traces the impact of an educational innovation designed to introduce and embed peer observation of teaching across 160 GP teaching practices.

Our study frames learning as a social practice (Wenger 1998). We are therefore interested in exploring how engagement in peer observation of teaching, as ‘observer’ or ‘observed’ changes the ways doctors think about and enact their educational practice. This includes exploring how its shapes their professional identity as medical educators. The key research question we seek to answer is: to what extent, and in what ways, can peer observation of teaching (POT) contribute to the building of sustainable communities of (medical education) practice in primary care?

This is a qualitative study, seeking to make sense of the lived experiences of GPs who act as observers and those they observe. It will draw on routinely collected data deriving from the peer observation process (‘key learning points’ as free text) and data from focus groups and individual interviews with participating GPs. We will recruit from a range of practices (e.g. from single handed to larger group organisations, those with high and lower levels of student satisfaction) in order to reflect the variety of teaching placements and level of organisational support.

Our planned study seeks to respond to identified needs in the faculty development research literatures. Firstly, to embed research studies in a theoretical framework, secondly to analyse key features of faculty development activity and, thirdly, to explore the role of faculty development ‘within the larger organisation in which it unfolds’ (Steinert et al 2016:782).

Friday 23 June Alumni Auditorium, 11.45am
How “willing” is “willing”? Peer physical examination in a diverse UK medical school
C Nath, K Shires, K Thomas, J Jones
University of Birmingham

Background:
Revisiting student willingness to participate in peer physical examination (PPE) in the context of an increasingly diverse student body.

Peer physical examination (PPE) is an educational method employed to enhance clinical skills training. The University of Birmingham is proud to have a large and diverse cohort of medical students which reflects the local patient population and the NHS workforce delivering their care. An appreciation of this diversity has driven us to consider the framework in which we facilitate PPE. This work supports the call to establish quantitative research from more diverse student groups than has previously been reported(1). Internal evaluation revealed that some students felt unable to fully participate in PPE. This supports findings in the literature that not all students are willing to participate in PPE and that willingness is influenced by a number of factors including gender, ethnicity and religiosity(1). This study identifies the willingness of our students to participate in PPE. This will provide clear direction for in-depth qualitative research and directly inform our PPE policy. The ultimate ambition of the research is to collaboratively explore practical ways in which we can optimally support PPE so that all students have a positive learning experience.

Methodology:
All 335 first year students undertaking the MB ChB course at the University of Birmingham were invited to participate in an electronic questionnaire survey in the first semester. Participants completed questions based on an adaptation of the widely used and validated Examining Fellow Students Questionnaire survey. Quantitative data relating to willingness to participate in PPE was collected. Students provided information relating to their willingness to examine 12 discrete body regions on peers of both the same and opposite gender to themselves. The same questions were repeated asking students to indicate their willingness to be examined by peers. Free text response boxes allowed students to provide further detail in relation to their perceptions of PPE.

Results:
216 of 335 students completed the electronic questionnaire achieving a 65% response rate. Quantitative data was analysed using SPSSv22. Results demonstrate that our students are considerably less willing both to examine and to be examined on named body regions by their fellow students than those reported elsewhere in the literature. This is true for a number of body regions traditionally considered as non-intimate, including the “chest” (no breast exposure) and the “abdomen”. The data collected includes demographic information and we report a higher percentage of those completing the questionnaire at our medical school describing themselves as religious, compared to studies reported elsewhere. This data will inform further qualitative research however emergent themes from the free-text data reveals that students value PPE as an educational tool but have a number of concerns, including concerns relating to professional behaviour of peers.

Discussion:
Medical educators have a responsibility to provide an inclusive learning environment that encourages students to respect the values of their peers. This led us to look specifically at attitudes towards PPE in our diverse student population. It has been historically shown that PPE of “non-intimate” body parts is acceptable to most medical students (with >95% of students often used as a determinant of acceptability). For our own students, this was less likely to be the case. We believe that this contemporary observation may be of interest to all medical schools and that there is translatability to other healthcare courses. This quantitative research and emergent themes derived from free-text data provides clear direction for further qualitative research. The findings should drive us all to consider the specific needs of each individual in relation to PPE, and what practical measures we can put in place to ensure parity of opportunity between all students.

References:

Ref: 379, Wednesday 21st June, 3.00-3.20pm, Seminar Room 5
Communication Skills

Experience of Parallel Communications training, a novel communication skills workshop, in 342 medical students in a UK medical school
M Durve, B Clark, E Park
Imperial NHS Foundation Trust

Background:
It is essential that medical students complete their training equipped with the skills and attitudes necessary to provide patient centred care (PPC). In our institution junior doctors reported that their previous communication skills (CS) training left them feeling unprepared to deal with the situations they faced on the wards – explaining care, dealing with people with high emotions, breaking bad news, and discussing sensitive issues such as “Do not attempt cardiopulmonary resuscitation” (DNACPR) decisions. The Parallel Communications workshop is an innovative, learner centred, simulation based CS workshop designed address this unmet need. The session is based on reflective practice and threshold concept to try to change the way that participants think about communication and PPC.

Methodology:
Training was delivered to over 350 clinical medical students between 2013 -2016. The training was delivered by 2 facilitators to small groups of 6-10 students over 90 minutes.
The workshop gives participants the opportunity to recount their experiences, reflect on effective and ineffective aspects of the interaction, the impact of the language used and explore the patient’s perspective. Participants then gain experience by rehearsing difficult scenarios with a simulated patient and consolidate learning through debriefing and didactic learning. The workshop is modular in nature with each brief module using and building on the knowledge and skills developed in the previous module and increasing in difficulty— for example participants are presented with emotionally neutral simulated patients before learning how to manage patients with high levels of emotion and only then move on to breaking bad news.
Anonymised paired data was collected from participants immediately before and after the workshop using paper based questionnaires. Data was collected regarding participants’ confidence on a scale of 1 (not at all) to 10 (as confident as possible) for different aspects of communication.
The paired T test or Wilcoxon signed ranks were used to assess the impact of the training on the participants pre- and post-training survey scores for each question.

Results:
Full data sets were available for 342 participants. The results showed a statistically significant improvement of medical students self-confidence for all questions asked.
Analysis showed a statistically significant improvement in the confidence of the medical students in their ability to choose and use the best words when communicating (p.1) and breaking bad news (mean 2.7, IQR range 1-4, p IQ range 1-3, pusions around DNACPR (mean 2.86, IQR 2-4, p previous CS training as part of the curriculum and 98.4% (253 students) rated this workshop as very useful (87.2%) or useful (11.3%). The real world nature of the scenarios was highly praised by participants who felt that it was relevant to their learning needs.

Discussion:
We have shown that we can significantly impact on medical students confidence in several aspects of communication using a short, structured training workshop. We are collecting data of the long term impact of the session and are developing a trial to objectively assess impact.
This workshop was not designed to replace other CS training but to develop those skills for application to real-world situations and to prompt reflective practice with regard to communication and PPC.
Due to the modular nature of the workshop it is adaptable for the needs of different groups and we are currently rolling out training to health care professionals in our trust.

Ref: 502, Wednesday 21st June, 3.00-3.20pm, Seminar Room 7
Teaching communication skills to medical students in the clinical years: what do students identify as the most important learning goals?
J Millichamp
Dunedin School of Medicine, University of Otago, Dunedin, New Zealand

Background:
The field of communication skills training for medical students and other healthcare professionals has advanced considerably in recent years with a particular emphasis on teaching the basic skills when students are at a junior level. However, questions remain about what medical students need to know about more complex and challenging communication situations that arise as they progress through their medical training and take on more responsibility for direct patient care. The aim of this study was to determine the priorities/views/preferences of a class of medical students (n=73) in relation to communication skills training. Students were asked to complete questionnaires prior to, and at the conclusion of, the Communicating in Challenging Situations Module – a communication skills course that runs through the first clinical year. They were asked for their views about the sort of skills, patient characteristics and clinical situations they most wanted to learn about and the teaching methods which would best enhance these skills.

Methodology:
A cohort of medical students (n=73) was surveyed at the beginning and end of their first clinical year to investigate their views of their learning needs and priorities in relation to communication skills training. At the beginning of the year, students were asked to identify areas of communication which they found difficult and would like to improve on, as well as the best ways for their tutor to assist their learning. At the year’s end, after completing an established communication skills course, students were asked to complete a course evaluation questionnaire with questions on what they found to be most valuable and what topics, patients and clinical situations should be included in their future communication skills training. The response rate was 94.5% for the initial questionnaire and 97% for the second questionnaire, which added to the strength of the findings.

Results:
Results from the two questionnaires identified several common themes in terms of teaching content that students valued most highly. Three communication skills topics were identified as important learning areas by many respondents: 1) expressing empathy with patients, 2) emotion-handling skills (the patient’s and one’s own) and 3) managing sensitive conversations – particularly in relation to death and dying. When asked about the optimal learning conditions for the acquisition of advanced communication skills, many students noted the importance of a “safe” learning environment, multiple opportunities for practice with “real” people, the provision of individualised feedback and opportunities to observe positive role models (eg, senior doctors interacting with patients).

Discussion:
The findings will be discussed in terms of the implications for communication skills training during the clinical years of medical training.

References:

Ref: 264, Wednesday 21st June, 3.20-3.40pm, Seminar Room 7
Medical student experiences of resuscitation and discussions surrounding CPR status.
A Aggarwal, I Khan
Northampton General Hospital

Background:
The default position is that cardiopulmonary resuscitation (CPR) should be undertaken in the event of cardiac arrest unless a patient has a ‘do not attempt CPR’ (DNACPR) document (1). Communication with patients and relatives regarding this decision can be complex (2). Since 2014, doctors have a legal duty to consult with the patient on DNACPR decisions, at least to inform them the decision has been taken if they believe that CPR would be futile (3). These conversations, if neglected or do not go well can have distressing consequences. Any member of the medical team, including junior doctors, may have to discuss the issue of CPR status with patients or their families (2). In this study, final year medical students were interviewed about their experiences of CPR on the wards and of observing conversations about DNACPRs to explore whether they would be comfortable and equipped to have an informed discussion with a patient about CPR in the future.

Methodology:
Twenty final year medical students from two medical schools were interviewed about their experiences. Interviews were transcribed verbatim and thematic analysis undertaken.

Results:
Nine of twenty students interviewed had never witnessed CPR on the wards. Those who had seen it found that aspects of it were distressing. Four of the twenty students had never seen CPR status being discussed with a patient. Those who had seen it felt that they witnessed good communication skills and that it was useful to see. However, no students reported seeing a difficult conversation. Half of the students interviewed reported being turned away from difficult conversations by clinicians. Only two of the twenty students would feel comfortable raising the issue of CPR with a patient when they start work in August.

Discussion:
It is vital that doctors are comfortable talking to patients about resuscitation. Other papers have described the long-term benefit of communication skills training in this area(4). Given the importance of DNACPR communication both for patient dignity and also legally, we should be ensuring that all new doctors are trained and ready to have these discussions on graduation.
The final year medical students interviewed felt fundamentally unprepared to discuss resuscitation with patients and relatives. All students interviewed felt that a simulation or role-play based session during their course would be helpful in preparation for starting work.

Half of the students reported being turned away from difficult conversations between doctors and patients or relatives. Most of the students felt that this was the correct action to take, although there is little evidence regarding this area of the hidden curriculum. Watching an experienced clinician deal with difficult conversations can be an invaluable learning event, and medical students should not be turned away unnecessarily.
The students also expressed discomfort in talking to patients about death and dying, and that the possible death of patients was not something that they routinely thought about. This is a well-established phenomenon, and the increasing incorporation of palliative care into the undergraduate curriculum may help to overcome this (5).

References:
1- https://www.resus.org.uk/dnacpr/decisions-relating-to-cpr/
3- R (Tracey) v Cambridge University Hospitals NHS Foundation Trust & Ors. (2012) EWCA 3860 Civ 822.

Ref: 063, Wednesday 21st June, 3.40-4.00pm, Seminar Room 7
A mixed-methods study to explore the system for assuring continuing fitness to practice of Health and Care Professions Council (HCPC) registrants

P Crampton, J Illing, C Rothwell, S Corbett, P Tiffin, D Trepel
Monash University, Australia

Background:
The Health and Care Professions Council (HCPC) system which assures the continuing fitness to practise of its registrants is based on self-assessment. The system has been devised in consideration of right touch regulation principles, appropriate to mitigate the risks of the sixteen regulated professions (1,2). This research project was commissioned by the Department of Health to answer the question ‘What is the evidence for assuring the continuing fitness to practise of Health and Care Professions Council registrants, based on its Continuing Professional Development (CPD) and audit system?’

Methodology:
A mixed-methods approach was used across five work streams including: literature review of CPD; 44 telephone interviews with HCPC council members, employers, assessors and registrants; online survey of approximately 1208 registrants into HCPC’s CPD systems and processes; linkage of fitness to practise data with CPD data; and examining the costs and resources currently required in the total process of assuring continuing fitness to practice. The presentation will focus on the findings from the interviews and survey. We analysed the interview data using a framework approach and used the five HCPC Standards (2) as the analytic framework, together with a theme on continuing fitness to practise and improvements. Descriptive statistics were used to analyse the survey data.

Results:
We found positive evidence to support Standards 1 to 4. Standard 5 raised most of the concerns and these were related to anxiety about selection for audit, better awareness about what a good CPD profile looked like, the potential to fabricate a CPD profile, the lack of an external validation of practise, lack of employer support to complete audits and lack of feedback following audit. From the survey findings, all types of CPD activity was viewed as having benefits for patients; however, respondents did not see how the CPD and audit system could identify registrants who should be de-registered on the basis of not fulfilling continuing fitness to practice requirements.

Discussion:
The HCPC CPD and audit system together with the self-declaration assessment form the basis of continuing fitness to practise for registrants. Both are currently entirely based on self-assessment. The registrants, assessors, employers, and council members believed the system helped to drive up standards and keep their skills up-to-date. Most of the limitations about the CPD and audit system focused on the appropriateness of the audit and the validity of self-assessment evidence. We have made a range of recommendations that have come from this research.

References:

Ref: 239, Friday 23rd June, 10.00-10.20am, Seminar Room 1
Mindfulness for doctors - an effective way to improve staff well-being and development?
V Pattni, J Winterburn, E Klinger, S Oxborrow, L Cambray, S Chalstrey
University of Bristol

Background:
Mindfulness is a practice which allows participants to focus attention on the present moment and promotes acceptance of thoughts and feelings without judgement (1). Clinically, the National Institute for Health and Care Excellence (NICE) recommends mindfulness-based cognitive therapy (MBCT) for patients as a psychological intervention for prevention of depression (2). However, there is paucity in the literature whether mindfulness can improve junior doctor well-being and improve patient care (3). Stress experienced by staff in the NHS has profound effects on the individual and has a significant knock-on effect on healthcare provision and patient care, with £2.4bn lost to NHS staff absence each year (4). In light of worsening staff morale impacting professional development, we proposed that using mindfulness in junior doctors could be a novel approach to tackling such issues. This study aimed to assess staff well-being following an 8 week course of mindfulness.

Methodology:
Mindfulness sessions were carried out in our trust between June - July 2016. The sessions were delivered by Ridgeway Mindful Psychology (RMP). The cost of the course was fully subsidised by RMP and the Department for Postgraduate Medical Education. 8 two-hour sessions were delivered over 8 weeks. The sessions were structured to cover the theory, science and practice of mindfulness; group discussions about experiences of stress; a silent one day retreat for participants. Participants were recruited by email adverts which were distributed to all doctors working at the hospital. Places were allocated on a first-come, first-serve basis. Eight participants took part in the study. Participants gave written consent to allow their data to be anonymised for the study. Pre and post measures were used to determine whether mindfulness had a positive impact on staff well-being. The validated measures included: the Warwick-Edinburgh Mental Well-being Scale (WEMWBS); the Perceived Stress Scale (PSS); and the Self-Compassion Scale (SCC) (short form). Questionnaires were filled in immediately before and after the course.

Results:
Data was collected for 7 out of 8 the participants. The data for one participant was incomplete and excluded as they did not attend the final session. For the WEMWBS, 6 individuals showed an increase in individual scores. The mean change in score was 8.85 (pre-assessment score 45.86; post-assessment score 54.71). For the PSS, all participants showed a decrease in individual scores. There was a decrease in mean score of 9.43 (pre-assessment score 21.43; post-assessment score 12.00). For the SCC, 6 participants showed an increase in individual scores. There was an increase by 4.43 in the mean score (pre-assessment score 38.14; post-assessment 42.57).

Discussion:
The results suggest that mindfulness can offer a novel approach to improving junior doctor well-being. In a small group, a change of 3-8 points demonstrates that mental well-being meaningfully improved over the course of the project. Mindfulness had a positive effect on the traits measured by the WEMWBS and PSS. Mindfulness had a significant effect for some participants in the SCC, but had little on other participants. We propose that an intervention such as mindfulness improves mental well-being and stress through the role of social learning, given the important role of social interaction (5). Here, participants could share their stressful experiences, at work and personally, together as a team and in a safe environment. This shared identity in a community of practice (5) helped participants to further enhance their personal and professional development. The study’s findings are limited by small group size and large standard deviation in mean scores so statistical significance is limited. Further mixed-methods studies are needed to ascertain whether improvement in staff well-being through mindfulness can translate into improved patient care.

References:

Ref: 186, Friday 23rd June, 9.20-9.40am, Seminar Room 1
Translating behavioural science for continuing professional education: The Change Exchange  
L G Byrne Davis, M Johnston, C Armitage & J Hart  
University of Manchester

**Background:**

Behavioural science tells us that opportunity and motivation are crucial in determining practice. Previously, we conducted a study that highlighted the need to consider capability, opportunity and motivation in relation to ABCDE approach in Ugandan healthcare workers. This study led to extensive revision of the AIM© and M-AIM© courses to increase their alignment with the practical experiences of the clinical staff in Uganda in respect of implementing their skills and knowledge.

Building on this work, behavioural science volunteers worked with health partnerships between UK and low-income country health organisations in Uganda, Mozambique and Sierra Leone. This study report on the activities of the behavioural scientists and the perception of the health partnership leads of their impact on the implementation.

**Methodology:**

The behavioural scientists worked in groups of two or three with the health partnerships in UK and Uganda, Mozambique or Sierra Leone. Each team produced a report which detailed their quality improvement plan, do, study, act cycle. Reports were combined and analysed by the team in order to describe activities. We carried out an inductive content analysis to describe the range of activities undertaken. Behavioural scientists were contacted (by email, skype or face to face) as questions arose about the reasons for focusing on certain activities. We interviewed the health partnership leads and educators (n=8) at the beginning and during / at the end of the involvement of the behavioural scientists. They were asked about their perceptions of behavioural science related to implementation, their experiences of having the behavioural scientist working with them, whether they thought their input had impacted on the outcome of their partnership projects and whether they would use behavioural science in future projects. Interviews were transcribed and analysed inductively and thematically. We conducted a content analysis to describe the perceptions of the partners regarding the outcomes of behavioural scientist involvement and then a thematic analysis to look for perceptions of implementation, behaviour and in particular exploring the experiences of involvement in a health partnership engaged in education and training of workforce.

**Results:**

Activities were predominantly education and training about behaviour change, working with educators to include behaviour change techniques in education, observation of education and of practice and evaluation of the perceptions of health professionals. Behavioural scientists reported that conducting robust evaluations was difficult, even when taking a quality improvement approach, due to time constraints and difficulties in explaining the purpose of evaluations. Health partners were overwhelmingly positive about the activities and impact of the inclusion of behavioural scientists. Benefits they reported included a) changing education and training courses to include more focus on implementation and less on knowledge acquisition, b) evaluating the benefits of education and training by impact on practice and on determinants of practice i.e., capability, opportunity and motivation.

**Discussion:**

Behavioural science was embraced by the health partnership leads and educators. Their perceptions of the impact were that a shift in focus towards implementation and away from competence is beneficial in time limited courses. Benefits were predicted by the partners in that they expected a greater impact on practice of their education and training, although they had no data to support that at the time of the interviews. The activities that behavioural scientists undertook were wide ranging and involved working with the health partners in the UK and in the low-income country. Future work will assess whether using behaviour change techniques and having a focus on implementation improves practice to a greater extent than competence based education alone.

**References:**


*Ref: 106, Friday 23rd June, 9.40-10.00am, Seminar Room 1*
Inclusive medical practice: medical students' knowledge and attitudes towards lesbian, gay, bisexual and trans (LGBT) patients.
J Semlyen, G Panagiotaki
UEA

Background:
In the UK an estimated 6% of the population are recognised as lesbian, gay, bisexual or trans (LGBT). Evidence of health inequalities in this population are well documented. Negative staff attitudes and behaviours are often seen as the main barrier to accessing health services leading to poor treatment outcomes and different standards in care provided (Albuquerque 2016; Kitts 2010) with known variation in standards if care received by LGBT people (GMC Equality and Diversity Strategy, 2014-17, p. 7). Improving doctors’ perceptions and knowledge about people who identify as LGBT may go some way to reduce the health disparities being experienced by these groups (White et al 2015). It is important therefore for training programmes to measure future trainees’ attitudes in order to foster positive views and perceptions early in their career. Moreover, it is crucial for medical students to develop a broad understanding of key diversity issues to ensure that all patients receive good standards of care (GMC, 2014-17).

Methodology:
Undergraduate medical students at the Norwich Medical School (Years 1, 3 and 5) were invited to participate in this cross-sectional study. Participants’ knowledge and attitudes were measured by a self-report questionnaire developed by Kelley et al 2008, specifically designed to measure medical students’ attitudes towards LGBT persons. This 15 item survey was based on the Index of Attitudes toward Homosexuals (Hudson and Rickets, 1980). Participants (N=132): 2.8% of the sample identified as Gay/Lesbian; 6.2% identified as Bisexual, and 4% preferred not to say. The remainder (86%) identified as Heterosexual/Strait. No participant identified as trans but one participant identified their gender as non-binary (0.69%) with two participants preferring not to say. Otherwise respondents selected male (31%) and female (69%).

Results:
Knowledge: Initial results show that 21% of the sample were uncertain if lesbian patients need cervical screening as frequently as heterosexual women and 5% of the sample agreed that this was accurate. There was a lack of agreement over whether LGBT patients have unique health needs (68% agree/strongly agree; 17% disagree/strongly). Not all the participants felt comfortable treating patients they knew were LGBT and although the majority did (93%), not all the respondents did. Attitudes: early findings are that negative attitudes, although present, did not translate into healthcare behaviour. A small percentage of the sample agreed with the statement ‘I believe that homosexuality is immoral’ (3.5% agree/strongly; 6% uncertain) although no one stated that they would prefer not to treat patients with a minority sexual orientation. Heteronormativity was commonly displayed with 60% of respondents admitting that they assume patients and colleagues are heterosexual on first encountering them.

Discussion:
Our research findings show that there is variable knowledge about and attitudes held towards LGBT patients in medical school trainees. Evidence shows limited teaching on LGBT health within medical training (Obedin-Maliver et al 2011). Both increased contact with LGBT patients and specific teaching on LGBT health improves student knowledge of, engagement with, and attitudes towards LGBTQ people (Kelley et al 2008). Despite development in medical education (Adams, 2016) implications for teaching and curriculum development for healthcare professionals are still indicated (Semlyen, 2015). Such teaching should not be optional or tokenistic but be embedded and integrated within mainstream medical teaching which in turn will help foster an inclusive curriculum embracing diversity in all its forms.

References:
Semlyen J. Health Psychology. In The Palgrave Handbook of the Psychology of Sexuality and Gender 2015 (pp. 300-315). Palgrave Macmillan UK.
PHEM: from individual SSC choice to integration within the undergraduate curriculum
C John, P Davies
Gloucester Academy, University of Bristol

Background:
Prehospital Emergency Medicine (PHEM) focuses on the specialist provision of medical care in the out of hospital environment. It is increasingly recognised as an integral component in the care of acutely unwell patients. Postgraduate training programmes for PHEM have developed rapidly over the last decade and are now mapped onto a properly structured curriculum[1]. Development of undergraduate level PHEM training has been more sporadic; perhaps because of the perceived niche nature of the specialty, the lack of academic consensus on the role of PHEM in undergraduate training, or paucity of adequate placements.

Structured undergraduate PHEM programmes have been developed by medical schools predominantly in London, but have yet to be adopted at a national level. Such programmes are popular and frequently oversubscribed with medical students; being undertaken in bespoke intercalation degrees, Student Select Component (SSC) units, and medical electives[2-4]. The University of Bristol is an example of a school expanding provision of PHEM experience, with plans to include mandatory paramedic observation shifts in its new undergraduate programme[5].

With prehospital services under increasing strain and limited space in the medical curriculum, there needs to be clear evidence of whether PHEM undergraduate training provides appropriate learning opportunities, and ultimately translates into better clinical care.

Methodology:
Components of a self-directed SSC undertaken by a year three student at the University of Bristol were analysed and mapped to the General Medical Council (GMC) Outcomes for Graduates curriculum[6]. Information was supplemented by comments from questionnaires completed by other students who had undertaken PHEM placements. Results were used to design a bespoke PHEM SSC, which will be run by the University of Bristol from 2017.

A feasibility analysis was also undertaken in parallel to ensure that any PHEM programme would be deliverable and sustainable.

Results:
The PHEM SSC provided clinical exposure to a large number of GMC outcomes and practical procedures, as well as opportunities for development of additional curriculum areas. These were predominantly in areas of transferable non technical skills such as team-work and communication, which are increasingly recognised as important in patient safety.

Discussion:
PHEM is a developing specialty which can provide opportunities for undergraduate training; both for students interested in pursuing a career in (P)HEM, but also for developing broader practical and non technical skills. The inclusion of PHEM within mandatory undergraduate education is a reflection of both the growth of PHEM as a specialty and the training benefits it can provide. SSCs can be used effectively to achieve outcomes of the undergraduate curriculum, and do so in a truly learner centred manner. Whilst this has already been adopted as optional training for some students, we feel there is a strong case for this being part of the mandatory undergraduate curriculum.

References:

Ref: 360, Wednesday 21st June, 4.20-4.40pm, Seminar Room 7
Creating and Evaluating the Impact of a Core Syllabus in Anatomy Education using a Delphi Methodology.
C Smith, G Finn, C Hennessy, J Stewart, S McHanwell
University of Sussex

Background:
The questions of what students studying medicine need to know and when they need to know it are important for curriculum planners, anatomy educators and their students, as our ever-expanding medical knowledge necessitates a continual re-evaluation of what constitutes core knowledge. The new syllabus published in 2016 contains 156 learning outcomes grouped by body region.

Methodology:
The project involved three stages. During the first two stages a Delphi panel (N=39) was asked to ‘accept’, reject’ or ‘modify’ the learning outcomes. The third stage allowed the original authors and the research panel to correct minor syntax and any anatomical errors.

Results:
From the original syllabus of 182 learning outcomes only 15% remained unchanged. All learning outcomes achieved over a 90% acceptance score. This new syllabus has provided one definition of necessary knowledge however questions of how to deliver that content and with what resources require further exploration. Twelve months after publication the new syllabus has been downloaded 1,235 times with 38 click links being through Twitter. The altmetric score is 16. A two-stage evaluation was conducted. Firstly, a focus group of anatomy educators (N= 12) was conducted identifying seven key themes: standardisation, validation, leverage, need, praise, limitations, feelings and perception. Secondly, a questionnaire completed by anatomists and clinicians (N=24) revealed 100% awareness of the new syllabus.

Discussion:
Overall the evaluation has shown that the new syllabus has been well received, although there was concern expressed over its uptake in clinical years. Additionally, some further needs were identified in the form of other core syllabi (neuroanatomy, embryology and histology). The new syllabus is being accepted within the anatomical community in the UK as the new gold standard for gross anatomy. Further work is needed on para-syllabi including embryology and neuroanatomy and on core syllabi for different health care professions.

References:
Health professionals and medical educators’ perspectives on how to better teach and evaluate diversity training: “We value science above the human being”

RE George, M O'Reilly and N Dogra
Department of Psychology, Neuroscience and Behaviour, School of Medicine, University of Leicester

Background:
The General Medical Council (GMC) Tomorrow’s Doctors1 emphasises the inclusion of diversity training in medical undergraduate education and within the National Health Service Equality & Diversity training is mandatory for all healthcare professionals2. Despite the frequent inclusion of the term ‘diversity’ in educational policy and healthcare, ambiguity remains in its usage. This lack of consensus applies not only for the definition but also for the development, delivery and evaluation of the training. Consequently medical schools in the UK interpret GMC guidance in different ways resulting in very variable content and delivery3. This study aimed to gather the perspectives of health professionals and medical educators’ around how to better teach and evaluate diversity training.

Methodology:
A participatory research approach was adopted in this study. A series of participatory workshops were conducted in collaboration with two healthcare organisations across the U.K. Five participatory workshops were conducted with a total of 48 participants and were designed to obtain specific answers to the study aims through discussion around four tasks. Template analyses with principles of thematic analysis were used to analyse the data and identify themes.

Results:
Three over-arching themes emerged from the data which will be presented; the first was defined as ‘deconstructing cultural competence’ which explores the lack of conceptual clarity in how ‘cultural competence’ is defined and understood. The second theme revealed that diversity education should be focused on the nuances and dynamics of clinical relationships, where the influence of both the patient and the professional are acknowledged and explored. In particular the relationship considered the most important to examine with respect to diversity education was the ‘practitioner-self’ relationship. This requires health professionals to explore, unpack and reflect upon the meaning of diversity on an individual level and in relation to colleagues, peers and patients, to facilitate an appreciation and value for diversity in others. A reconstructed theoretical framework around ‘relationships-centered care’ was developed, outlining the new dimension of the ‘practitioner-self’ relationship. The third theme highlights a number of educational ‘improvements for diversity training.’

Discussion:
The findings conveyed the heterogeneity of understanding of the terms ‘culture’, ‘diversity’ and ‘cultural competence’, but there was consistency in what was expected of professionals who are competent to provide care for diverse patient needs. The findings provided clarity around how diversity education can be better theoretically informed and evaluated. Framing diversity teaching around ‘relationships’ with the ‘practitioner-self’ relationship at the centre holds promise to a theoretical model that could integrate diversity education throughout the medical and healthcare curriculum.

References:

Ref: 036, Wednesday 21st June, 5.00-5.20pm, Seminar Room 7
Use of Online Platforms to Connect and Develop Healthcare Professionals: Why bother and what works?
A Manley, C Trimble, S Arnott, L Wilson, K Humby, R Halawa
University of Bristol

Background:
The delivery of educational material online can overcome geographical and availability barriers, but is criticised for creating a sense of isolation in users (Northup 2001). Evaluations of eLearning often focus on knowledge outcomes, overlooking the impact of reducing face-to-face teaching time on inter-professional networking opportunities, and social learning (Berge 2002). This may contribute to non-participation in the learning process (Porima 2006), reduce staff morale, development and personal investment in the organisation. In contrast to these concerns, online professional communities are being developed to support collaboration, foster communities of practice and facilitate inter-professional problem solving (Chan 2015).
Online platforms which facilitate online communication between healthcare professionals vary greatly in terms of their target audience, purpose, uptake and impact. This systematic review synthesises the literature to highlight the possible positive and negative outcomes of such interventions and the key aspects which influence success.

Methodology:
We have undertaken a systematic review of the literature. Medline, PsycInfo, CINHAL, ERIC and the British Education Index databases were searched to identify papers examining the use of online platforms which facilitate peer-to-peer communication amongst healthcare professionals. Results were screened as to whether they met the inclusion criteria by two reviewers. Studies including quantitative and/or qualitative evaluations of students reaction to or the impact of such interventions on student/patient outcomes were included. Papers were reviewed independently by two reviewers using a proforma which included MERSQI and BEME tools for the evaluation of research quality. Findings from these papers were synthesised and key findings will be presented.

Results:
The use and impact of online platforms which facilitate communication amongst healthcare professionals will be discussed. Online learning can reduce face-to-face networking opportunities. However examples of using online communication to enhance collaboration exist at many levels in healthcare professionals, from the use of forums amongst small groups of healthcare students to reduce isolation, support reflection and aid retention (Maag 2005, Tan 2010), to global connectivist MOOCs promoting inter-professional collaboration on healthcare topics and dissemination of good practice (Liyanagunawardena 2014). Many top-down initiatives to implement digital solutions to community building are unsuccessful (Sandars 2006) and concerns such as the possibility of breaching patient confidentiality or repercussions of disclosing personal information online are valid. The ways healthcare professionals and students use and benefit from communication online, the pros and cons of different approaches, factors effecting uptake and effectiveness, potential adverse consequences and recommendations to enhance effectiveness will be discussed.

Discussion:
When designing and evaluating e-learning materials it is important to consider the unintended impact delivery of a course online may have on sense of community amongst healthcare professionals. Online learning platforms with a peer-to-peer communication component can enhance learning and morale. A grassroots approach to design, involving potential users, and blending online and face-to-face networking opportunities can promote uptake. Extrinsic incentives may increase use but reduce interaction quality. Well-designed materials have the potential to build a sense of community and promote networking and collaboration despite geographical boundaries.
A sense of community existing between healthcare professionals can promote wellbeing, workforce retention, and resilience, which positively impact on the care we provide (Maben 2012). When it comes to fostering such a sense of community, online learning can be a problem, but it may also be the solution.

References:
Sandars J & Langlois M (2006) Online collaborative learning for healthcare continuing professional development: lessons from the recent literature Education for Primary Care 17: 584-592

Ref: 461, Thursday 22nd June, 4.40-5.00pm, Seminar Room 10
Modern Medicine against Modern Slavery: an e-Learning tutorial for medical students
L Williams, G Feder
Maidstone and Tunbridge Wells NHS Trust

Background:
Human trafficking entails the recruitment and movement of people, often by force, fraud, or coercion, to be exploited for their labour [1]. Epitomised by human rights violations, social and economic marginalisation, human trafficking is often likened to a ‘21st century slave trade’. Widespread effects on physical, mental and sexual health of trafficked persons are well documented [2,3,4]. A study published in 2015 found that up to one in eight NHS staff and up to one in five maternity staff reported they had known or suspected that a patient was a victim of human trafficking [5]. In 2011, the European Union issued a directive requiring that victims of human trafficking be provided with necessary medical care [6]. In spite of this, international research suggests health professionals, as well as medical students, lack confidence to respond to human trafficking [5,7,8]. As the demand grows to capitalise on the role of medical personnel and their unique position, attention has shifted to educating the next generation of doctors to help work against human trafficking.

Modern Medicine against Modern Slavery, an e-Learning tutorial for medical students, aims to; 1) demystify human trafficking and the global scale; 2) explore the health impacts; 3) increase students’ confidence in identifying, caring for and referring trafficked persons to specialist services.

Methodology:
This is a quality improvement project using ‘Plan-Do-Study-Act’ methodology.
Plan; We performed a needs analysis of twenty-five medical students at University of Bristol to identify current understanding of the issue, demand for teaching on the subject, and preferred learning methods.
Do; Modern Medicine against Modern Slavery is an e-Learning tutorial for medical students. It is a one-hour tutorial comprised of interactive material based on learning theories, including a virtual patient tool whereby students must navigate through a clinical scenario.
Study; Students will be surveyed at the beginning and end of the course to gauge their knowledge and confidence in understanding human trafficking, identifying, caring for and referring potential victims. We will use focus groups and interviews to provide feedback for further improvement.
Act; If successful, we plan to incorporate the tutorial into University curriculum alongside existing teaching on vulnerable persons.

Results:
Results from the initial and final survey and focus group feedback will be presented at ASME 2017 if accepted.

Discussion:
Educational interventions have proven hugely successful in similar areas, for example domestic violence [9]. This is the first time the University of Bristol has developed a relevant e-Learning resource on human trafficking for its medical students. Provided the pilot tutorial is successful, we hope to expand to more students in the future. By becoming part of the struggle against modern-day slavery, small changes made by today's medical students could transform the lives of those in the most vulnerable circumstances.

References:
Innovative online medical education videos - the future of eLearning?
N Gupta, E Banhma-Hall, M Archibald, A Gupta, I Barton
Cambridge University Health Partner

Background:
Trainees in General Internal Medicine (GIM) in the East of England Deanery provided a poor GMC survey for their GIM training. Attendance is generally difficult due to rotas, clinical duties and unsociable shift patterns. As a result, trainees do not feel they are able to access regular, good GIM training.

Online eLearning tends to be focused on text and infrequent images. Videos are a small portion and are not the focus. In addition, videos of lectures delivered to an audience increases the space and hence reduces the engagement of an online audience with the material. With attention spans shorter online compared to in-person, lectures of over 30-minutes duration are less likely to be watched in full.

Methodology:
The innovative eLearning for Health project at Cambridge University Health Partners, utilizes the lessons from YouTube and Hollywood to create bespoke educational experiences for trainees that engage and educate.

Innovative online videos of lectures were filmed using green-screen techniques with presenters (registrars and consultants) looking directly to camera and engaging the viewer directly. The videos, a maximum 30-minutes each are accompanied by multiple-choice questions which need completion, and to be completed successfully prior to receiving the certificate which can then be attached to the ePortfolio.

There are also feedback opportunities to ensure that they can be developed and their efficacy maximised.

A key aim for the project is not to replace, but be an addition to more traditional educational models.

Results:
Over 20-videos have been filmed and placed online, for trainees in the East of England Deanery after financial support from the East of England Deanery. The videos have been very successful, with trainees finding them engaging and a positive learning experience. There has been a great appetite for them, with positive overwhelming feedback for their usefulness and scope.

Discussion:
e-Learning is still in its infancy, and as such the methods that can be employed are still developing. Engaging audiences online is important, as well as allowing for ongoing traditional medical education programmes to continue. This e-Learning for Health has proven there is an appetite for innovative online medical education that does not rely on text only, or opportunistic filming of lectures that are delivered to other people, but which fail to engage the online audience. In addition, other NHS Trusts are interested in accessing the online videos due to their own difficulties in meeting their educational requirements.

By providing this additional tool to the medical education arsenal, we are helping to support juniors and maintain morale, especially at a time when clinical considerations appear to supersede all others.

Ref: 011, Thursday 22nd June, 4.00-4.20pm, Seminar Room 10
Metaphors we teach by (with apologies to Lakoff and Johnson)
E Fowler
University of Bristol

Background:
Lakoff and Johnson1 in their key text discuss how we use metaphors to understand the world. I have in the past explored some of the conceptual metaphors used in medicine during teaching, such as the military metaphors used in oncology. Work in the field of teacher education has looked at how metaphors conceptualise teaching roles2 and in particular how through the use of conceptual metaphors3 of acquisition and participation academics conceptualise teaching that is either didactic or interactive. In our work in Health Professionals education we aim to develop teachers who are more interactive than didactic in their teaching methods. This study addresses the question: does a medical education course effect change in students’ conceptualisation of teaching and learning? This is an exploratory piece of work to identify whether it would be useful to focus more explicitly on the language we use to talk about teaching and learning as a way of setting up cognitive dissonance4 and facilitating the development of our students into participants in active learning and teaching.

Methodology:
Existing student assignments were subject to discourse analysis, focusing on discourse around teaching and learning. The first reflective assignment of the teaching certificate and the final short reflective piece were used to provide a comparison with the start and end of the course. A full cohort of September 2015 starters on the PG certificate make up the sample. Current students who have progressed to the diploma or masters stages were excluded to ensure no conflict of interest with the researcher. A pilot phase of analysis has been carried out to develop a coding framework for the full cohort.

Results:
The pilot phase has identified a preponderance of acquisition metaphors where learning is pictured as an object that is often delivered or provided. This use of terminology does not always change between the first and final assignment and may well be part of a dominant conceptual metaphor within medical education. Allied to this conceptual metaphor was the underpinning presuppositions that teaching equals learning; hence knowledge was provided, delivered or gained. Sessions could be over-saturated with knowledge. Evidence of students aiming to facilitate sessions still emphasise the teacher as in control, although some sense of shared responsibility for learning can occasionally be seen; for example, in the use of pronouns – we started the session with an ice-breaker – rather than metaphor. An analysis framework is being developed through an iterative process and full results will be presented at the conference.

Discussion:
Discourse analysis has proved a useful tool to look at how medical education students conceptualise teaching. This exploratory piece of analysis confirms some of Wegner and Nückles3 findings, that “there is not a deterministic relationship between metaphors, approaches and intentions”, but this work is suggestive that an explicit exploration of personal metaphors of teaching and learning might be helpful as part of a teaching programme.

References:

Ref: 426, Friday 23rd June, 9.00-9.20am, Seminar Room 8
‘Great idea’, ‘sounds scary’, I’m too busy’? Identifying the barriers in developing a staff peer observation programme
I Munjal, R Thomson, I Goff, J Fisher, J Stewart
Northumbria Healthcare NHS Foundation Trust

Background:
Peer observation is a method of evaluating teaching practice (1) which can be used to quality assure and enhance teaching (2). It can also promote personal and professional development, sharing of knowledge and experience, and fostering of the ‘educational community’ (3). Despite this, we have experienced difficulties achieving ‘buy-in’ from undergraduate medical teachers in our department. This project aimed to understand barriers to peer observation, to then facilitate the development of a bespoke peer observation programme for undergraduate medical teachers.

The specific objectives were, firstly, to identify factors that may influence individuals’ engagement with peer observation, and to then seek solutions for commonly experienced challenges.

Methodology:
An online questionnaire, distributed using “SurveyMonkey” was the chosen method, as it is anonymous, accessible and non-intrusive on respondent’s time. The questionnaire was designed to capture qualitative and quantitative data, providing breadth and depth of responses, and was pre-tested and piloted on a small group of SLs (2) and TFs (3). Descriptive statistics and content analysis were used to analyse the quantitative and qualitative data respectively.

Results:
The questionnaire was sent to 44 people (11 teaching fellows (TFs), 24 senior lecturers (SLs), and 9 nurse teachers (NTs)). Responses were received from 26 people, giving a response rate of 59%; TFs: 7 (64%), SLs: 14 (58%), NTs: 5 (56%).

Peer observation was perceived positively across all groups. Scheduling was a challenge, especially by SLs and NTs. NTs and SLs indicated concern that the experience could be ‘threatening’ to some, TFs did not. Out of themes identified, 11 (42%) commented on need for peer observation as a “quality assurance” process, both for themselves and others.

Considering preference for being observed; 4 TFs (36%) ranked SLs as their first choice, 2 (18%) expressed no preference and 1 (10%) for another TF. For SLs, 10 (71%) expressed no preference and 4 (29%) would prefer another SL. For NTs, 1 (20%) stated their first choice would be another NT, 1 (20%) preferred a SL, and 3 (60%), a TF. For all groups, when the respondent was asked to consider being the observer, 15, (57%) stated ‘no preference’ to who they observed.

Discussion:
The educational leads within Northumbria Healthcare NHS Foundation Trust are committed to the educational development of its team. Understanding barriers to implementing peer observation, to development a strategy for supporting it, was the stimulus for this inquiry.

Respondents regarded peer observation as a positive addition to their teaching development. However, with a response rate of 58%, the ‘buy-in’ to the questionnaire may reflect a subtler message about the faculty's engagement with peer observation. Possibly, those who did not engage with the questionnaire would also not engage with peer observation, and this group could potentially have provided richer data. Response rates were consistent across the groups, which may suggest that engagement issues are not limited to one group in particular.

Interestingly, the idea of peer observation as quality assurance is evident; this may suggest that, unless made "compulsory," a change in design alone cannot ensure that all will engage.

Despite perceived concerns, the barriers to peer observation were very real. The primary issue was scheduling a time where both observer and those being observed were available; using preordained (randomised) pairings increased chance of this issue. Lack of time balancing clinical work and teaching was also identified, and more prevalent with SLs than TFs. There was also a sense of threat and discomfort presented if paired with an unfamiliar person. The next phase of this project aims to use this information to address these barriers. The programme designed must be sufficiently flexible to accommodate differing staff needs, abilities and aspirations, whilst also ensuring a truly developmental experience for all.

References:


Ref: 384, Friday 23rd June, 9.20-9.40am, Seminar Room 8
How do doctors in training develop a professional identity as clinical teacher: a literature review
H Thampy
University of Manchester

Background:
There is increasing emphasis on all doctors developing a teaching role, cultivated from the trainee stage (1). Trainees who teach do so as near-peer tutors (NPTs) with multiple mutual benefits (2). Trainees develop teaching competencies and find that teaching others helps identify gaps in their own knowledge. Students equally benefit by being taught by someone closer in age and/or stage with teaching better matched to the learners’ needs. Although there exists a wide range of papers exploring the role of trainee doctor as teacher, these have tended to focus either on describing or evaluating teaching skills courses aimed at providing trainees with the skills and knowledge needed to teach, or are reports describing the range of realised and potential benefits that can be gained through trainees taking on teaching roles. However, little attention to date has been made to understanding what trainee doctors themselves feel about their teaching role and how their identity as a clinical teacher develops as part of, and how it fits in to, their overall developing professional identity as a doctor. This presentation reports findings from a review of the literature in this area and identify key themes for onward study.

Methodology:
A review of the existing English-language literature in this area was conducted using four databases (Pubmed, PsycInfo, ERIC, Web of Science). Searches were built to identify papers that related to three key search terms – doctors in training, teaching and identity. Each term was searched for using synonyms and truncations in order to make the search as comprehensive as possible and used the following: (trainee$ OR resident$ OR registrar$ or intern$), (teach$ or educat$), (identi$ OR role$). These were then combined using the AND Boolean operator. In addition, a MeSH term search on Pubmed and PsycInfo was conducted using the terms ‘internship and residency’ and ‘teaching’ with text word ‘identi$ OR role$’. Thirdly, a manual search of article titles from Medical Education, Medical Teacher, The Clinical Teacher and Academic Medicine from the last ten years was conducted. These searches collectively identified 583 papers. Duplicates were removed. The resultant list was then screened for relevance initially using a title review and then abstract review. Only papers that specifically focussed on the topic of trainee doctors’ identity as teachers were included in the final analysis.

Results:
Five articles were identified, in itself demonstrating the dearth of published work in this field. These included quantitative work such as exploring whether student feedback influenced trainee doctors’ teaching identity as measures using a previously validated tool as well (3) as qualitative work using semi-structured interviews with trainees to look at their understanding of their teaching role (4).

Discussion:
Full details of the articles’ key research conclusions and/or main discussion points will be presented. From this, suggestions will be made for future work in this area.

References:

Ref: 103, Friday 23rd June, 9.40-10.00am, Seminar Room 8
The value of a peer learning medical education portfolio workshop in early career development
A Chu, J Horsburgh, N Salooja
Imperial College London

Background:
Medical educators are encouraged to keep an education portfolio to highlight achievements, demonstrate competence and incorporate reflective practice (1). It is also often a requirement of postgraduate qualifications or for national accreditation. A need to support early career medical educators and trainee doctors in this professional development activity has been identified locally and nationally (2).

Methodology:
An interactive workshop targeted at trainees was designed based on a published educational framework, incorporating 12 roles of the teacher (3) combined with a qualitative self-assessment scale (4). Five workshops were delivered to junior educators (n= 108).

In a peer learning setting, participants used self-reflection and small group discussions to identify educational achievements and development needs using the framework. Near-peer facilitators guided participants in goal-setting.

Workshop evaluation consisted of both immediate assessment of participant motivation and a follow-up survey 6 months later to identify any changes in practise. This is consistent with a more advanced stage of Kirkpatrick’s hierarchy of evaluation (behaviour change) (5).

Results:
Thematic analysis of free-text responses indicated the most useful workshop aspects included: i) motivation for portfolio development ii) having a structure iii) considering different educational roles. 74/95 indicated either increased or sustained motivation to keep a portfolio and 76/95 found the educational framework useful as a potential structure for their portfolios. Follow-up evaluation 6 months after the workshop indicated sustained motivation for portfolio development in self-selecting respondents (24/26). The most common changes were to: i) re-structure their portfolios, ii) document evidence more carefully iii) actively seek educational opportunities.

Discussion:
Our data indicates that a medical education portfolio workshop using a role-based self-assessment framework in a peer learning setting was well-received by early career educators. For some, sustained change in portfolio development and career development in different educational roles was reported. The workshop was valued by trainees as a useful educational resource and source of motivation. This framework could be used as the basis for further professional development workshops for early career educators.

References:
2. Trainees in Association for Study of Medical Education (TASME) committee
3. Harden RM & Crosby J. AMEE Guide No. 20: The good teacher is more than a lecturer - the twelve roles of the teacher Medical Teacher (2000) 22 (4):334-347

Ref: 092, Friday 23rd June, 10.00-10.20am, Seminar Room 8
A Multinational Approach to Curriculum Design
Stephen Jones, C Rothwell, M Carter, W Medford, A Myers, J Illing
Newcastle University

Background:
Newcastle University, UK, has developed an international campus in Malaysia; Newcastle University Medicine Malaysia (NUMed). The campus offers the undergraduate degree in Medicine (MB BS). Delivery in Malaysia is equivalent to that in the UK and leads to the same degree being awarded, by Newcastle University, UK. This is the first overseas Medical Undergraduate Programme to be recognized by the General Medical Council (GMC) and it is also recognised by the Malaysian Medical Council (MMC). The MB BS degree programme delivered on both sites is currently undergoing a curriculum review. As part of this process it is important that the views of stakeholders in both Malaysia and the UK inform the curriculum development. Indeed this is a requirement of the General Medical Council in Promoting Excellence. The delivery of the curriculum on two sites where the context of care is quite different provide and opportunity to compare and contrast the views of stakeholders in the UK and Malaysia. The purpose was therefore to collate, compare and contrast a range of views from stakeholders to inform curriculum outcomes for Newcastle University.

Methodology:
Stakeholders were invited to take part in a focus group to find out their views on the current MBBS curriculum across both sites.

The four questions participants asked were:
1. What are strengths and weaknesses of the current MBBS course that you have observed?
2. What type of doctor should NuMed/Newcastle produce?
3. How well are the students prepared for working in Malaysia/UK?
4. What are the curriculum outputs required for working in Malaysia/UK?

Results:
A total of 18 focus groups have taken place in The UK and Malaysia including:
Students (across all years)
Patients
Academic staff/ Clinical staff
Administration and support staff
Graduates

Communication skills and patient centeredness was emphasized as an area that students and graduates felt well prepared for and this was mirrored by those in a clinical environment. Patients in both countries felt that they provided a real strength to the course offering teaching and help to the medical students, specifically around communication skills. The timing of exams, particularly finals and the way assessments were marked were also highlighted as areas for improvement. In Malaysia in particular stakeholders stressed the importance of generic capabilities over specific knowledge and practical skills when considering the type of doctor the course should produce. This group emphasising the need to be caring and compassionate, to be empathic, holistic, warm, calm, polite, friendly, good listeners to exhibit professionalism through ethical behaviour and on being resilient independent and confident.

Overall, all stakeholders felt students in the UK and Malaysia were well prepared in relation clinical knowledge. Orthopaedics and surgery were subjects that students felt less prepared for at NuMed. All stakeholders felt that the fourth year (SSC) was not as well structured as it could be and led to loss of skills and confidence in their clinical skills.

Discussion:
We have been able to consult a variety of key stakeholders on the MBBS curriculum in the UK and Malaysia. This has been of direct benefit and has influenced thinking as we develop a common curriculum to be largely delivered in health care systems that are perceived as being quite different. There was more consensus than difference between stakeholder groups and between the different countries. Some of the differences in Malaysia may well reflect the fact that in the two year Malaysian House Officer Training programme all graduates will undertake a 4 month placement in orthopaedics as well as general surgery. Although the models of health care in the two countries might appear to be rather different there was a agreement on the type of doctor the programme should produce with a strong emphasis on generic capabilities and professionalism over specific knowledge and skills.

References:
Promoting Excellence: Standards for Medical Education and Training. General Medical Council. 2015
Ref: 349, Wednesday 21st June, 4.40-5.00pm, Seminar Room 8
The Continuous Quality Improvement ‘Squeeze’ into the Curriculum in PA Education: A Model for Adaption in Physician Associate Programmes

T Kindratt, VL Orcutt
University of Texas Southwestern Medical Center

Background:
The Accreditation Review Commission on Education for the Physician Assistant (ARC-PA) requires that physician assistant (PA) programmes in the United States include quality improvement (QI) training in their curriculum (1). Several curriculum models for medical students and physician residents have been developed and disseminated in the medical literature. However, few PA programmes have been able to ‘squeeze in’ a structured QI curriculum to meet the needs of the changing health care landscape, other ARC-PA requirements and certification preparation. Berkowitz and colleagues conducted focus groups of PA educators and found the largest barriers to curriculum implementation were time and faculty expertise (2). Others surveyed clinical co-ordinators and found that 71% of programmes included a QI introduction in their didactic curriculum yet 38% of programmes reported that none of their students participated in QI projects (3). Due to this gap, the purpose of our study was to develop, implement and evaluate a curriculum for PA students addressing knowledge, skills and attitudes (KSA) towards QI.

Methodology:
This was a quasi-experimental design using quantitative survey questionnaires. Participants included PA students enrolled in their didactic (first 15 months) and clinical (second 15 months) phases. Our methodology included three stages: 1) curriculum needs assessment; 2) pilot curriculum and 3) curriculum evaluation. During the needs assessment, didactic (N=35) and clinical students (N=42) completed an online questionnaire via Survey Monkey from September through December 2014. Students answered ten questions using 5-point Likert scales (1=strongly disagree; 5=strongly agree). Identified gaps in self-reported knowledge, skills and attitudes guided the pilot curriculum development. During the pilot curriculum stage, a curriculum including didactic, clinical and experiential learning components was developed. The didactic curriculum included two lecture hours during the third semester. The clinical curriculum included a 3-hour workshop during the third semester of supervised clinical experience. Students were given an option to complete QI projects to satisfy their graduate project (dissertation) requirements. Students were offered opportunities to participate in department-wide QI projects at two student-managed homeless shelter clinics. During the curriculum evaluation stage, needs assessment data were re-evaluated and served as a pre- and post-test. Following curriculum completion, the post-test was administered to determine changes in KSA. Involvement in and dissemination of QI projects were tracked by project participation and conference submissions.

Results:
Prior to instruction, both student cohorts had limited knowledge of the QI project life-cycle, PDSA models, and QI measures. Compared to didactic students, clinical students were more knowledgeable of the QI project life-cycle (means=2.93 vs. 2.12; post gains in knowledge were of PDSA models and QI project life cycles). Two students selected the department-wide QI projects for their graduate project. Both projects were accepted for local, national and international presentations.

Discussion:
Our curriculum enhanced PA students’ QI knowledge and skills in most areas. Our curriculum model was effective at improving students’ QI knowledge and skills, allowed students to participate in community-based QI projects and can be tailored to meet the needs of other PA programmes interested in enhancing their QI curriculum in the United States and England. We plan to expand our training longitudinally and develop a distinction for PA students in QI and patient safety.

References:
Can a Geriatrics Interprofessional Simulation for Medical and Nursing Students Change Attitudes to Interprofessional Learning?
T McGowan, J Mjojo, J Pattinson, A Blundell
Nottingham University Hospitals NHS Trust

Background:
The proportion of the population over 85 is increasing and currently those over 65 account for approximately 70% of UK hospital bed days (1). Managing frail older patients will represent the majority of the workload of current medical, nursing and physiotherapy students, and yet the evidence suggests that they are prepared inadequately for this (2).
An interprofessional simulation session on topics typically affecting older patients was developed at Nottingham University Hospitals to attempt to improve this, and this study seeks to understand the impact of the teaching.

Methodology:
A 3½ hour simulation session for nursing and 4th year medical students was run twice every 5 weeks on the theme of comprehensive geriatric assessment. 3 scenarios were run using simulated patients covering topics of incontinence, falls, delirium, elder abuse and complex discharge planning, with a further manikin based scenario on nutrition and pressure sores. Each scenario was debriefed immediately by members of a multidisciplinary faculty.
A 10 point non-validated knowledge test and a validated scale on attitudes to interprofessional learning - the Readiness for InterProfessional Learning Scale (RIPLS) (3) - were completed before and immediately after the session, along with 5 point Likert scales for evaluation. Preliminary data was analysed using SPSS 22, using Wilcoxon Signed Rank Test for paired data and Mann Whitney for unpaired data.

Results:
57 medical students and 23 nursing students have participated in the study so far, which is ongoing.
The mean score on the knowledge test (out of 10 points) for medical students increased from 5.1 (SD= 1.68) before the teaching to 7.7 (SD= 1.58) after the teaching, which was statistically significant (Z= -5.49, P < 0.05). However the RIPLS score for the nursing students was unchanged (Z= -0.43, P= 0.67) with a mean of 84.8 before the teaching (SD= 6.94) and 84.4 afterwards (SD= 8.68).
Evaluation showed that all 80 of the participating students either agreed or strongly agreed to both “the content was at an appropriate level”, and “the content was relevant to my training”.

Discussion:
The data collected shows that it is feasible to run an interprofessional geriatrics simulation that is relevant to both nursing and medical students, and that it appears to improve the knowledge of both groups.
The data indicates the medical students initially had a less positive attitude to interprofessional learning than their nursing colleagues, but this improved following the interprofessional simulation in contrast to the nursing students whose attitude was unchanged. This may be partially because the nursing students are already working and learning in a multidisciplinary team on the ward, or due to a ceiling effect of the RIPLS as several participants scored 95/95 before the simulation started.
Limitations of this data are the lack of a control group, the lack of a validated knowledge test and the lack of further data collection at the end of students’ placement to show any sustained impact of the training. In addition, it was difficult to recruit physiotherapy students, limiting the extent of the interprofessional nature of the simulation to nursing and medical students.
Overall, this interprofessional geriatrics simulation was well received by both nursing and medical students, appears to improve knowledge of both groups as well as apparently improving the attitudes to interprofessional learning of medical students. Further work will include seeking to establish the reliability of the knowledge test, continuing to gather data for more students and the potential involvement of pharmacy students instead of the physiotherapy students.

References:

Ref: 483, Wednesday 21st June, 3.00-3.20pm, Seminar Room 11
Interprofessional Education as a valued integral part of undergraduate placement Primary Care Learning
E. Anderson, C. Sanders, A. Ward
The University of Leicester

Background:
There are a plethora of documents led by the World Health Organisation which propel greater integration across health professional education.1,2 Interprofessional education is much more than a classroom activity, and should be offered regularly in clinical/practice training with relevant professionals who work together. We explore some of our challenges to make this a reality in undergraduate medical education in Primary Care, where historically only medical students have received placement tariffs and we scope the changing UK horizon. We share our experiences of setting up IPE in primary care following new placement possibilities in newly formed Primary Care Academies, building on our success in hospital settings.3,4

Methodology:
This is a mixed methods study. Practice teachers have completed training questionnaires and interviews. Students have completed pre and post-course questionnaires and qualitative data using free text comments and focus groups. Quantitative data is analysed using SPSS and qualitative comments using thematic analysis. Ethical permission is being sought to consider the impact on patient care and service organisation.

Results:
We have trained 58 City and County Primary Health Care educational leads to support practice-based IPE (training continues). Attendees value the training and feel better prepared to deliver IPE. The learning activities involve; i) community management medicine (n= 60 medical; n= 60 pharmacy); ii) care planning (n=24 nursing; n=24 medical students). All students value the learning when scored against their learning outcomes (P

Discussion:
This research has been propelled by the Community Provider Educator Networks (CPEN) from Health Education England and concerns for the loss of General Practitioners and Practice nurses. This research is helping to make IPE an integral part of Primary Care placement learning. On-going challenges include integrating assessments to further student engagement, faculty development and resource implications.

References:

Ref: 430, Wednesday 21st June, 3.40-4.00pm, Seminar Room 11
Inter-Professional Education

Benefits and Barriers to Interprofessional Learning between Registrars and ANPs – a Qualitative Analysis

T McGowan, P Ehilawa, A Blundell, A Gordon, J Pattinson, N Woodier
Nottingham University Hospitals NHS Trust

Background:
Healthcare is increasingly provided by multiprofessional teams, and interprofessional learning (IPL) is recognised by the World Health Organisation and the General Medical Council as a vital part of training healthcare professionals (1, 2). A relatively new member of the multidisciplinary team in the UK is the Advanced Nurse Practitioner (ANP), with significant numbers only existing in the NHS over the last 15 years, and whose role in working autonomously managing undifferentiated patients has an overlap with tasks traditionally performed by doctors. Literature already exists around IPL between doctors and nurses (3, 4), which shows this is effective and well received. However, the only published evidence studying IPL between ANPs and doctors is from America (5-7), where the nurse practitioner role is more established, and the doctors studied had only recently graduated. 4 pilot simulation days between ANPs and general medical registrars on topics typically affecting older adults had already been organised. This study sought to analyse the views of those participating on how well this particular combination of healthcare professionals worked.

Methodology:
Separate focus group interviews (n=8) were conducted for registrars and ANPs after each simulation day, exploring the views of 38 participants on IPL between ANPs and registrars. The focus groups were then transcribed and qualitative analysis was conducted using a framework analysis approach, using NVIVO 11 software.

Results:
6 themes were identified:
• Appreciation of other professions’ attributes: This was a reflection of ANPs respecting the knowledge of registrars, registrars valuing the experience of ANPs and both groups appreciating the different approaches to clinical problems demonstrated by the other profession.
• Backgrounds and roles: Participants felt the roles were complementary, and that the relationship was more equal than between registrars and nurses. Although some registrars were unfamiliar with the ANP role and felt it was ambiguous, participants felt the simulation improved this.
• Integration and hierarchy: Participants reported the IPL improved integration between professions and that hierarchy was less of an issue between ANPs and registrars than other professional groups. One of the challenges to reducing hierarchy was the registrars feeling that “the buck stops with me”, and suggestions were made how to further reduce this hierarchy.
• Intimidating: The interprofessional aspect of the learning did not appear to cause any intimidation between the two professional groups, and ANPs felt any intimidation they experienced working with registrars improved following the training.
• Knowledge well matched: Participants felt the registrars and ANPs had similar levels of knowledge, certainly compared to alternative pairings of professions, and that this facilitated their learning. They discussed the broader basic training of registrars with the potential for them to become very specialised, in contrast to ANPs who often have a narrower field of expertise but tend to super-specialise less.
• Impact of IPL between registrars and ANPs: Participants felt the IPL made the simulation more realistic, but were split as to whether the addition of further professions would be helpful. Some ANPs described the presence of the registrars stopping them being challenged to their full potential.

Discussion:
The combination of registrars and ANPs works well for interprofessional simulation, due to similar knowledge levels yet contrasting professional backgrounds and approaches to problems, and was well received by participants. Potential issues such as unfamiliarity with the ANP role and hierarchy appeared to improve following the training. Challenges that arose were ensuring the ANPs were challenged sufficiently and around the feeling of ultimate responsibility some of the registrars had, both of which can potentially be minimised through good scenario design, and also around the ambiguity of the ANP role.

References:


Ref: 427, Wednesday 21st June, 3.20-3.40pm, Seminar Room 11
Evaluation of the educational impact of multiprofessional handover
A Codd, C Randell, J Turner, E Coghill, J Hanley, B Burford, G Vance
School of Medical Education, Newcastle University, Newcastle upon Tyne.

Background:
New doctors and nurses often have limited understanding of each other’s roles, responsibilities, and competences, with potential consequences for clinical care (1). Interprofessional educational initiatives may help address this practice need (2,3). Handover is an important source of interprofessional interaction, and participation in structured multiprofessional handover (MPH) activities might give clinical staff greater insight into wider team practice in the workplace. In this study, we aim to examine the educational impact of MPH in a multi-site Foundation Trust by considering effects on attitudes to interprofessional learning, clinical team qualities and understanding of each other’s roles.

Methodology:
Mixed methods are being used. These comprise an initial Trust-wide audit of current handover practices, validated questionnaires and focus groups. Staff on wards with differing handover (+/- MPH) approaches (total 13) are being invited to complete a 34-item, paper-based questionnaire, assessing perceptions of IPL (Readiness for Interprofessional Learning [RIPLS] tool)(2), and teamwork qualities and values (Assessment for Collaborative Environments [ACE-15] tool)(4). Participants are being invited to attend a multiprofessional focus group to explore the issues in further depth.

Results:
45 of 83 (54.2%) wards completed the audit. Questionnaire data collection from staff on wards with and without MPH is underway. Full results from the audit, survey and focus groups will be presented.

Discussion:
Early audit findings show a diverse range of handover practices. However, few wards regularly have handover involving nursing, medical and other allied health professional staff. The study outcomes will help us understand more about how handover influences interprofessional learning and identify ways to support this in the workplace.

References:
1. Vance G, Burford B, Jandial S, Scott J. Identifying the work activities performed by doctors in the Foundation Programme. 2015. GMC.

Ref: 412, Wednesday 21st June, 4.00-4.20pm, Seminar Room 11
The challenges of running inter-professional simulation: Learning from experience and developing a toolbox
J Hartland, L Whatley, L Evans
Swindon Academy

Background:
On their first day of qualification doctors and nurses are expected to flawlessly work within a multi-disciplinary team in a high-pressure high-stakes environment. Despite the fact that the World Health Organisation and leading educational establishments have begun recognising and promoting this working (1) the majority of undergraduate teaching in the UK appears to be uni-disciplinary. Post-qualification “human factors” and team working are promoted as essential in the management of the acutely unwell patient, and yet during their most formative educational years nursing and medical students are distanced within the academic curriculum and in work based learning.
This joint submission between Swindon Academy and Oxford Brooke’s seeks to discuss the results of 2 years worth of MDT simulation and the experiences of the primary organisers.

Methodology:
Experiential discourse will be presented exploring barriers along with supporting evidence via analysis of feedback from teaching sessions justifying the benefit of these changes. This will include quantitative data analysis of simulations collected from approximately 250 nurses and 80 medical students across the 2015-2017 academic years. Additional thematic analyses of free text boxes will also be considered, alongside discussions regarding on-going research projects.

Results:
Experiential discourse will be presented exploring barriers along with supporting evidence via analysis of feedback from teaching sessions justifying the benefit of these changes. This will include quantitative and qualitative data analysis of simulations collected from approximately 250 nurses and 80 medical students across the 2015-2017 academic years. Additional thematic analyses of free text boxes will also be considered, alongside discussions regarding on-going research projects.

Discussion:
Please note data gathering is continuing. All data currently shows positive trends in confidence improvement and greater understanding of roles within the MDT. Primary issues include: timetabling challenges, motivating students, overcoming staff bias and accommodating for mixed learning outcomes. A toolbox is in development based on education experiences and student feedback, and will be presented at the conference.

References:

Ref: 392, Wednesday 21st June, 4.20-4.40pm, Seminar Room 11
Interprofessional simulations can significantly improve pre-registration student awareness of the Physician Associate role

C Nath, C Hirsch, J Ward, J Whetstone, T Valler-Jones, J Ennis, D Ward, S Buckley
University of Birmingham

Background:
Understanding the roles and responsibilities of other health professions is a key requirement for effective interprofessional working. This understanding is particularly important for professional roles new to the UK context, such as that of Physician Associate (PA), about which there is recognised uncertainty(1). IP simulations can be an effective way of enhancing student understanding of roles and responsibilities of established healthcare professions(2). Simulations involving students from ‘new’ roles such the PA are rare. We developed and ran a series of half day IP simulations for pre-registration medical, nursing, pharmacy, physiotherapy and PA students and evaluated perceived learning gain through pre and post intervention questionnaires.

Methodology:
Intervention: sixty-six students from the final or penultimate year of their respective programmes of study participated in 3 sequential simulation scenarios. High fidelity simulation was supported by an experienced simulated patient and scenarios were based around a core clinical presentation; shortness of breath. Between scenarios a debriefing session was held by a member of faculty.
Evaluation: Participant understanding of the roles and responsibilities of other professions, together with their views of interprofessional working and learning and perceptions of the IP simulation experience were collected using a Likert-type questionnaire adapted from that used in a previous study(2). Participants completed the questionnaire both before the simulation and immediately afterwards.

Results:
Sixty-six students responded to the questionnaire (100%). Quantitative data was collated and analysed using SPSSv22. Qualitative data was collated via open-text comments and a thematic analysis performed. The intervention improved understanding of the roles and responsibilities of all professions; this improvement was statistically significant for the roles of Physician Associate, Medicine and Nursing (p

Discussion:
In an era where traditional healthcare roles are changing rapidly, it is important that pre-registration undergraduate healthcare students have the opportunity to learn with, from and about the roles of their future colleagues. Our evaluation demonstrates that IP simulations can provide a highly effective opportunity for improving understanding of professional roles, and are especially effective for the “new” role of Physician Associate.

References:

Ref: 389, Thursday 22nd June, 4.00-4.20pm, Seminar Room 11
Is Interprofessional Education an effective way to teach about patient safety?
H Mottershead, S Fullwood, A Rehman
The Dudley Group NHS Foundation Trust

Background:
Interprofessional Education (IPE) is a compulsory element in a variety of healthcare curricula, including the ‘promoting excellence’ standards produced by the General Medical Council in 2015. However, course organisers are struggling to integrate it into existing medical education structures. It is especially useful to promote high-quality, collaborative teamwork, which is key to enhancing patient safety and preventing adverse events and errors.

Methodology:
An annual 1-day interprofessional study day in a West Midlands teaching hospital, with the aim of promoting patient safety. Attendance was voluntary. Faculty were also interprofessional. Introductory lectures followed by small group sessions, explored teamwork, human factors and communication using two video-based case examples. Feedback questionnaires used to collect qualitative results (Likert-scale and white-space questions) from students and focussed-group interview used to collect feedback from faculty.

Results:
Attendance by 72 Students in total: Medical (27), Nursing (19), Occupational Therapy (4), Physiotherapy (9), Pharmacy (6), Operating Department Practitioners (5) and Dietetics (2). Feedback was positive, including self-rated improvement in understanding of how collaborative work effects patient safety (“Not all team members see the same picture”). Faculty reflected that a 1-day event was a logistically feasible method of using IPE effectively. Difficulties occurred in ensuring that the cases were relevant to all healthcare professions in attendance.

Discussion:
IPE is a rational education strategy to teach students about how the quality of teamwork impacts upon patient safety. The reasons this teaching event was particularly successful include the use of interprofessional faculty, attendance by a wide-range and high number of interprofessional student groups, the mix of students in each small-group and the organisational merits of creating a 1-day only event. Further research is required to ascertain whether IPE events attended as a student will translate into improved teamwork in professional practice.

References:
2. Carlisle C. Do none of you talk to each other?: the challenges facing the implementation of interprofessional education. Medical Teacher. 2004; 26(6): 545-552.

Ref: 380, Thursday 22nd June, 4.20-4.40pm, Seminar Room 11
Who are you and what exactly do you do? : A prequalifying IPE strategy to improve appreciation of the multi-professional team
H Mottershead, S Fullwood, A Rehman
The Dudley Group NHS Foundation Trust

Background:
The aim of prequalifying Interprofessional Education (IPE) is to heighten student’s appreciation of safe and effective practice. Creating opportunities for them to explore ways in which their professions can work more closely together to respond more fully, effectively and economically to the multiple and ever increasingly complex needs of the population. Students who participate in team based IPE placements achieve a better understanding of teamwork processes, IPL outcomes, and an increased knowledge of their own and others’ professional roles. With this in mind students on placement at a West Midland teaching hospital undertake a Multi-professional learning (MPL) course which is one of the strategies developed by the IPE team in order to facilitate learning.

Methodology:
The courses are structured over one to two weeks, covering one of the following subjects; Cardiology, TIA/stroke, Oncology, Respiratory, Surgery and Diabetes. The students follow a timetable in small groups of three or four from varied professional backgrounds. Students attend relevant clinics, ward rounds, observation of procedures and receive mini teaching sessions from members of the specialist multi professional team. Workbooks, relevant to the particular MPL subject, have been created as a guide to the relevant subject containing learning objectives, and links to educational resources. Where applicable the team also took part in a simulated scenario in order to consolidate learning. Online feedback was collected from students on completion of the course.

Results:
In general students felt that they had gained an understanding of the roles of other professionals and were more aware of their own roles and how they fitted into a multi professional team. Students also reported that they had gained confidence in communicating with other professionals. However some students did not understand why they needed to learn in this way. In particular, attitudes towards IPE differed depending on the student’s profession. The timetabling was based around the medical program which affected recruitment from other professions and interprofessional group balance.

Discussion:
This particular IPE strategy has enabled students to discern that collaboration between professions needs to be planned and purposeful. The team are hopeful that the use of IPE will translate into provision of quality care which transcends the division between professionals after graduation. However, further research is required to investigate this. Furthermore, we intend to investigate why perceptions and attitudes differ between students from different professional backgrounds and use this to update our IPE provision.

References:

Ref: 364, Thursday 22nd June, 4.40-5.00pm, Seminar Room 11
Exploring informal interprofessional student-clinician interactions in the workplace
P Crampton, T Brown, K Hood, F Kent, M Leech, J Newton, M Storr, B Williams, CE Rees
Monash University, Australia

Background:
Healthcare student understandings of other healthcare professionals’ roles and team-working is a crucial component of being a qualified practitioner and yet is often learned as part of the informal and hidden curriculum(1). While the interprofessional learning literature during formal teaching is vast(2,3) very little research has explored informal interprofessional workplace student-clinician interactions. Three research questions were investigated: RQ1. What are students’ and clinicians’ understandings and experiences of workplace interprofessional student-clinician interactions; RQ2. How can effective workplace interprofessional student-clinician interactions be facilitated; RQ3. What are the similarities and differences in understandings and experiences across participant types (e.g. students versus clinicians, different professions)?

Methodology:
Eleven group and eight individual interviews were conducted with 38 students and 19 clinicians from across six professions (medicine, nursing, midwifery, occupational therapy, paramedicine and physiotherapy) in the Australian healthcare context. Data are being analysed using Framework Analysis(4).

Results:
Nine themes were identified in relation to RQ1 and RQ2: conceptualisations of interprofessional interactions, the context for interaction experiences, the nature of interaction experiences, factors contributing to positive interactions or negative interactions, positive consequences of interactions or negative consequences, suggested improvements to improve interprofessional learning, and how participants talk. We have yet to explore differences across participant types (RQ3).

Discussion:
The findings indicate a wide range of positive and negative informal interprofessional student-clinician interaction experiences, which provide valuable learning opportunities to understand the roles of others in the healthcare team, to understand converging role boundaries within a socially constructed practice hierarchy, and how teamwork is enacted. Useful interprofessional learning interactions included discussion with other professionals, observation of other professionals, direct instruction and feedback from other professionals and working with a student from a different profession. There is scope for the university to facilitate interprofessional learning in the workplace by better preparing students ahead of placements. Although this work was conducted in the Australian healthcare context, the findings have resonance with social structures and learning opportunities in other healthcare workplaces. Despite some of the methodological challenges, our study offers key implications for interprofessional policy and practice.

References:
Improving students’ understandings of ethico-legal issues in health through an innovative law-medicine PBL case
K Gilbert, P Trimble
Plymouth University Peninsula School of Medicine

Background:
Engaging students in learning around ethics and law is not always easy. Problem-based learning (PBL) is increasingly accepted as promoting student understanding in ethics and legal issues, improving communication and the ability to deal with uncertainty (1,2). Inter-professional learning (IPL) is an effective way to develop team working, creating a better understanding of different roles within the health and social care professions (3). Recent work shows that PBL is effective in promoting understanding in inter-professional teams, such as those engaged in palliative care (4). Ethics and law are key components of medical practice and whilst medicine and law do not fit the traditional definition of inter-professional learning (5), there are interrelationships between the two disciplines, which could usefully exploit the benefits of an IPL approach using PBL methodology.

Methodology:
This pilot aimed to study whether a learning community of healthcare and law students could improve their understanding and awareness of ethical health decisions, how the law applies and the impact on patient safety. Four student volunteers were recruited from Year 3 of each of the BMBS and LLB programmes at Plymouth University, to engage in a joint PBL case as part of wider modules within their own courses. Law students were invited to attend the medical school’s first year PBL induction plenary, to apprise them of the PBL format used within Peninsula School of Medicine. Furthermore, all participants were provided with a brief introductory training session to provide a taste of PBL in practice. A cross-theme case was developed using content expertise from Law and Medicine faculty/teachers, drawing on the literature on inter-professional learning, ethics for medicine and PBL (3,4,6). Student volunteers worked their way through the case using the Peninsula 8 step process (7), considering the ethical issues raised from the perspective of both medical practitioners and case law. In order to ensure that students developed a wider understanding of what they were learning through PBL, they were encouraged to actively engage in other aspects of each other’s courses; including a law mini-conference on medical negligence claims and a clinical negligence claim decision making panel. This increased opportunity for inter-disciplinary learning, provided a greater insight into the relationship between medicine and law. Student feedback was obtained via questionnaires prior to the first PBL session, as well as following each session and a by final questionnaire several weeks later.

Results:
Initial analysis of feedback from the student questionnaires from both disciplines was very positive, both citing an improved understanding and respect for the other discipline. We will present these findings and describe how this has informed the subsequent development of student-led educational interventions, which aim to further develop awareness of the law as it relates to medical ethics.

Discussion:
The disciplines of law and medicine share core values of beneficence, non-maleficence, autonomy and informed consent, related to patient safety and protection. However, the two professions are generally isolated and inculcated in their own world of understanding of common concepts and use individual vocabulary and jargon to describe such ideas. By introducing this cross-disciplinary opportunity we have initiated a process which explores the joint values of the two professions, promotes understanding and ultimately can bring benefit to the patients they serve. Furthermore, with the NHS spend on litigation increasing year on year (8) and well aired arguments with law and medicine both blaming the other, developing an improved mutual understanding at an undergraduate stage could, if used more widely, lead to improved working relationships and practices. We plan to develop this project further through establishing a healthcare / law learning community involving a wider spectrum of interrelated professions.

References:

Ref: 178, Friday 23rd June, 9.00-9.20am, Seminar Room 11
Teaching and evaluating smartphone applications: An inter-professional curriculum expansion for PA and nutritionist students
Tiffany Kindratt, S Rodder, VL Orcutt, C Koch, K McIlvaine, MA Neville
University of Texas Southwestern Medical Center

Background:
General practitioners (GPs) have limited time for lifestyle counselling in weight loss, diabetes and heart disease management. Mobile health (mHealth) technology is increasingly utilized to support lifestyle recommendations through measurements of calories, daily steps, glucose and blood pressure (BP). Over 165,000 health-related mobile applications (apps) are available and one-third of physicians recommend their use to patients (1). However, providers have little guidance on appraisal of apps to recommend to patients and evidence on the validity of their content (2). Furthermore, physician assistant/associate (PA) and clinical nutritionist (CN) students who may provide the majority of lifestyle counselling once in practice, have no instruction on patient education using mHealth technology. Our CN and PA training programmes at the University of Texas Southwestern School of Health Professions have provided an inter-professional nutrition (Life Habits) curriculum since 1990. We expanded and evaluated the existing Life Habits curriculum to include mHealth technology and investigated changes in PA and CN students’ ability to provide lifestyle counselling in weight loss, diabetes and heart disease that incorporated the use of educational MMAs. A secondary aim was to determine the validity of MyNetDiary in providing nutrient estimates as compared to two gold standard nutritional estimation tools (NutriBase, SuperTracker).

Methodology:
We conducted a mixed methods quasi-experimental study with PA (n=77) and CN (n=20) students during the spring semesters in 2015 and 2016. Students received a didactic, experiential and OSCE curriculum in weight management, diabetes and cardiovascular health. Experiential learning activities included: 1) a health fair where CN students shared weight management, diabetic, cardiovascular health and dietary recommendations; 2) the provision of a heart healthy meal with foods prepared to promote the lowering of cardiac risk factors; and 3) the completion of a two-day food record by PA students with subsequent nutrient analysis by CN students to demonstrate how patients can be educated to make dietary improvements. PA food records, similar to patient food records, have been traditionally recorded on paper. With the rise of educational MMAs (3), an expansion of the Life Habits curriculum was undertaken to educate students on the use of this technology to accomplish the same endpoint. This expansion included instruction on the critical appraisal of educational MMAs, the use of two educational MMAs (e.g. MyNetDiary, Withings Health Mate), and the delivery of effective patient education regarding the use of this technology. Students’ confidence and abilities in teaching patients how to use educational MMAs (MyNetDiary; Withings Health Mate) were measured by pre- and post-surveys and OSCE. Spearman correlations were run to determine correlation coefficients and statistical significance for MyNetDiary validations.

Results:
Confidence levels improved significantly on all items measured for both PA and CN students (psuccessfully demonstrating of how to enter foods into MyNetDiary, and 90.3% connecting the BP cuff with Withings application. Significant correlations were found when comparing MyNetDiary to NutriBase for all nutrients but magnesium and potassium, and for all nutrients when compared to SuperTracker (p

Discussion:
To our knowledge, this is the first study to investigate the effectiveness of an inter-professional curriculum designed to enhance students’ skills in providing lifestyle counselling with MMAs. Future research should examine how such inter-professional educational experiences translate into better coordination of care and improved patient outcomes.

References:

Ref: 165, Friday 23rd June, 9.20-9.40am, Seminar Room 11
Inter-professional Education: Enhancing supervision skills together to maximise learning opportunities in practice.
S Flavell, D Barleycorn, T Baker, J Hillier
Mortimer market Centre

Background:
Within the hospital environment, obtaining study leave for continuing professional development is increasingly difficult. This has long been the case with challenges of staff shortages, ability to obtain paid study leave and limitations within organisational culture.(1) We know that the workplace itself is a rich learning environment but with increasing numbers of students and pressures on time, quality is difficult to uphold. The effect of inter-professional education in healthcare has been studied widely with variable outcomes. Positive effects on team working and increased collaborative working are some of the reported benefits.(2) Providing education to enhance supervision and support for learners in practice should allow maximisation of the educational opportunities in the workplace. Creating an environment where different professions can come together will reinforce collaborative learning and teamwork. After securing funding from a Health Education North West London education bid this project was created.

Methodology:
The Education Department at the Royal College of Physicians of London (RCPL), with their expertise, were commissioned to design and deliver a bespoke two-day course covering supervision and support in practice. The target audience was any health care professional within the trust where supervision was part of their role. Learners needs were defined by a multiprofessional team. The areas felt to be important were:
1. The impact of personality on a supervisor-learner relationship through exploring Myers-Briggs Type Indicator (MBTI) outcomes
2. Effective supervision
3. Introducing coaching techniques
4. Giving effective feedback
5. Supporting learners in difficulty
A mixed delivery method was used with part interactive and part didactic teaching. Evaluation was designed to meet Kirkpatrick Levels 1 and 2 using a 5-point Likert scale questionnaire.(3) Feedback forms were given to the attendees to complete and pre and post course confidence questionnaires were completed by those individuals attending the second course.

Results:
In total, 52 individuals, from a mixture of professions, attended the course which was held on two separate occasions. 92% and 96% of attendees rated the relevance of the course to their educational needs and overall satisfaction as good or very good, respectively. Qualitative free text comments revealed, for many participants, the MBTI had given them a new insight into their personality. Many commented how this would impact their ongoing supervisory relationships and the changes that they would make as a result. There were also several comments reflecting the enjoyment of learning in a multidisciplinary way. Reported confidence had improved between the pre and post course questionnaires in helping learners in the following areas; setting learning objectives, setting a personal development plan, effective coaching, giving effective feedback, recognising and supporting a learner in difficulty.

Discussion:
This educational intervention to enhance staff skills in supervision showed improvement in confidence across all areas. Emotional intelligence gained as a result of the MBTI was overwhelmingly positive with commitment to change. The translation of learning into practice, however, is unknown and difficult to assess. In theory by achieving lower levels of Maslow's hierarchy of needs, for example confidence, should allow the learner to achieve higher levels of self-actualisation.(4) The course provided a welcome platform for inter-professional learning, maximising opportunities across a trust rather than learning in silos; this was something that was valued by participants. Learning together forges new relationships and networking opportunities between individuals across specialties, disciplines and grades. The value of which goes beyond knowledge acquisition and enables a consistent approach across the organisation when translating learning into practice.
References:

Ref: 155, Friday 23rd June, 9.40-10.00am, Seminar Room 11
Inter-Professional Education

Transitioning into interprofessional practice: Evaluation of an Aged Care IPE innovation
A Teodorczuk, G Symons, R Grymonpre, P Chan, M Parker-Tomlin, F Ellem, J Townshend, J McCormack, M Lynch, S Woodbridge, J Armao, N Reeves, G D Rogers
Griffith University, Gold Coast Campus, QLD, Australia

Background:
With the ageing population, the demands on healthcare professionals of the future are increasing. Innovative care approaches and the development of positive attitudes towards the older patient are called for. To address the associated greater care complexity it is widely recognised that effective collaborative practice and aligned educational approaches between professions are essential in the delivery of future safe care (1).

The purpose of our work was to evaluate an innovative interprofessional education (IPE) approach in the aged care setting and determine whether it improved interprofessional interactions and prepared learners for practice with the older patient.

Methodology:
Interprofessional teams of Griffith Health students were immersed in nine residential aged care settings on the Gold Coast, Australia to engage with elderly residents in September 2016. Elderly care-home residents volunteered to be interviewed by students from a range of professional programs. Students undertook specific tasks, including history taking, in a collaborative manner. An interprofessional simulated case conference followed, facilitated by an experienced healthcare practitioner. Students then individually reflected on their experiences. There was also opportunity for student presentation with IPL facilitators and available aged care staff. Evaluation was by means of a pre-test post-test UWE Interprofessional Questionnaire survey (2) and focus group methodology to explore lessons learnt. Paired-sample t-tests were used to analyse pre- and post- test quantitative data (utilising SPSS software).

Results:
We captured data on 135 students from across the healthcare spectrum involved in the IPE project. Of these, 86 were females and 49 males, ages ranged from 18 to 51 (M = 25.32, SD = 5.79). Disciplines represented included Medicine (59), Nutrition and Dietetics (41), Pharmacy (24), Dentistry (5), Social work (4), Human services and Social Work (1), and Exercise Physiology science (1). We found a significant difference between pre- (M = 29.45, SD = 3.84) and post-test (M = 25.36, SD = 4.28) scores on the interprofessional interaction scale of the UWE Interprofessional Questionnaire (p

Discussion:
Our novel IPE approach was successfully implemented in an aged care setting and positively influenced interprofessional interaction. Future issues to be determined include a) how do students develop respect for other professional roles? and b) does forming their own professional identity as team members support future transitions into aged care interprofessional practice?

References:

Ref: 021, Friday 23rd June, 10.00-10.20am, Seminar Room 11
The Backgrounds, Experiences and Attitudes of Volunteer Patients Supporting Undergraduate Medical Students at the University of Nottingham (VP study part 1)

C Sharratt
Undergraduate Medical Education Department, Nottingham University Hospitals Trust

Background:
Nottingham University Hospitals (NUH) Trust holds a database of volunteer patients (VPs) who support the training of undergraduate medical students at the University of Nottingham (UoN). These VPs are contacted to attend for specific pre-planned sessions to support particular learning goals. These VPs may differ substantially from other volunteers, whom are asked to support bedside teaching sessions on an ad-hoc basis, usually during a time of ill health or during a specific healthcare interaction (such as clinic attendance). Their motivations, prior experience, attitudes, and backgrounds may differ substantially. Prior literature has focused on this latter group (1,2). Little is known about the former group.

The primary objective is to describe from the perspective of VPs their experience of volunteering. Secondary objectives include i) understanding their backgrounds and motivations, ii) identify key aspects of sessions which require adaptation, iii) explore the attitudes of VPs towards other VPs, medical students and faculty, and how this many influence their VPs perceived experience of volunteering.

Methodology:
This is a two-part single site qualitative study. For Part 1 all VPs registered on the Trust database were invited to complete a questionnaire online or by post. Part 1 aims to provide a broad survey of all VPs, in particular to explore their backgrounds and motivations. Categorical questions assess information such as acceptable numbers and duration of student interactions per session and frequency of sessions.

Part 2 consists of audio recorded focus groups of VPs who have attended sessions in the 6-month period prior to study commencement. This aspect of the study aims to explore themes from the questionnaire, alongside exploring VPs attitudes. Recruitment and data collection is on going and will not be available for presentation in 2017. Trust ethics and R&D approvals were not required. University ethics committee review and approval was obtained.

Results:
To date, of 257 VPs registered on the database, 84 electronic and 34 written replies have been received. Eleven VPs have left the database during the study and 1 VP died. Preliminary analysis of the subset of electronic returns noted that the median age of VPs was 65-74 with 51.2% being male. At the time of the survey, 36.9% of VPs were in active employment with 80.6% of these working part time. VPs were from a range of occupational backgrounds, with 35.7% currently or previously having worked in the NHS. The most frequent motivations for volunteering included supporting the training of future NHS staff, to give back to the NHS, and to give back to NUH trust. Interestingly, 40.5% of VPs felt they were not being asked to volunteer enough, with the majority of VPs volunteering 1-4x /year. There was good alignment between VPs preferred level of student numbers and duration of each interaction with actual numbers and durations experienced by VPs.

The department overall scored highly on a Likert scale (1=very poor, 5=excellent) for essential service provisions such as facilities, communication and adaptation of sessions for health needs. Only a small proportion of VPs (6.5% n=5/76) had ever experienced adverse effects to their health, privacy or dignity, and of those who had raised this issue with departmental staff, 100% felt their concern had been handled and resolved in a manner that was acceptable to them. Further analysis of the complete data set is ongoing.

Discussion:
Provisional data suggests VPs appear to be highly motivated, with a significant proportion having worked for the NHS. VPs appear to be motivated by a sense of gratitude or debt to the NHS, and an altruistic interest in training future staff. VPs would like more opportunities to support students than they are currently offered, however current sessions appear to meet VP expectations. Further data analysis is required to support these initial conclusions, with all questionnaire data being available for the conference.

References:
Active participation of 'real-time' patients in undergraduate medical education

A Alao, B Burford, H Alberti, S Hrisos, D Kennedy, G Vance
Newcastle University

Background:
The importance of direct patient contact for medical student learning is widely accepted. Benefits include improved confidence, motivation and empathy, and potential to promote patient-centred practice [1,2].
The ‘patient’s voice’ is increasingly emphasized in educational strategies. However, much of this has focused on patients who have been recruited to have a primary educational role [3,4]. Students also benefit from contact with ‘real-time’ patients who have diverse health needs. The involvement of these patients does not usually extend to having an active part in the learning encounter, where the patient completes a potential triadic relationship with the clinical teacher and student.
This research is aimed at identifying ways to enhance the active participation of ‘real-time’ patients in medical students’ training.

Methodology:
The study utilises a pragmatic approach. Methods include questionnaire survey, focus groups with patients, followed by a focus group with medical students.

An initial questionnaire survey was conducted to assess patients’ views and factors affecting these, their knowledge of medical education, and willingness to participate in different scenarios. This was followed by four focus groups with patients where findings from the questionnaire survey were elaborated to explore contextual detail and identify ways by which patients’ active involvement can be enhanced. The focus group data was audio-taped, anonymised and transcribed to be analysed using thematic analysis.
The findings from the patient data will inform a further focus group with medical students where their views will be sought on what students need to gain most from the learning situation, whilst respecting patients’ autonomy.

Results:
Results from the focus groups with patients will be presented. A total of twenty-three participants attended the four focus groups. Thirteen codes have been developed which can be grouped into patient, doctor, and student factors, as well as factors relating to the encounter which may affect patients’ active involvement in medical education.

Findings suggest that patients are generally positive about their involvement in medical education for altruism and personal benefits. They are also satisfied with their previous experience with medical students, and described medical students as being professional and thorough. Patients would like the opportunity to give feedback to the students, as well as receive feedback on the impact of their involvement.

There is some ambiguity among patients on what their involvement with the students might entail. Barriers to patients’ involvement include lack of awareness among patients of its benefits and personal reasons. The doctor’s attitude has an influence on the ease with which the patient may participate in the learning dialogue.

Discussion:
This research has provided insights into patients’ perspectives towards their involvement in medical education. The findings are in keeping with previous research which suggest that patients are positive towards involvement in medical education [5-7]. Issues which may affect patients’ active involvement include: their awareness about medical education, nature of the clinical problem, attitude of the doctor, consent and feedback.
The data will provide evidence for a practical framework to encourage and prepare patients to take an active role in educational processes.

A further project is underway to disseminate empirical research findings to clinical teachers and patient educators. This will generate recommendations for incorporation into the medical curriculum.

References:

Ref: 242, Friday 23rd June, 9.40-10.00am, Seminar Room 7
Patient shadowing: an educational tool to enhance appreciation of the patients’ perspective
K Mazan, A Holmes, B Martin
Weston Area Health NHS Trust

Background:
Patient shadowing has been developed in the USA as a way of observing care delivered to patients from their perspective (1). Subsequently it has been introduced in UK medical schools, initially by the University of Dundee, who encouraged students to participate in patient shadowing as a tool for service improvement (2).

There is a growing understanding of the importance of teaching effective communication skills and consideration of the patients’ agenda in medical schools in the UK, and this is being prioritised in medical curricula. However, this is mainly done through simulation teaching and there are limited strategies described to incorporate this into the clinical environment. Moreover, recent GMC advice for medical educators focuses on patients being active partners in medical education (3).

We aimed to evaluate patient shadowing as an educational tool for developing communication skills, understanding of the patients’ agenda, and compassion. Through this we aimed to highlight to medical students the importance of patient advocacy and effective communication during the consultation, reinforcing a patient-centred approach to practicing medicine.

Methodology:
This was a pilot qualitative study, completed in the vascular outpatient clinic in Weston Area Health NHS Trust. All Year 3 medical students took part in the project during their clinical attachment. All students attended clinic in a ‘traditional’ way, sitting in with the consultant (control group). The majority of the students also attended a second clinic and shadowed patients instead, following patients on their clinic journey; to see the doctor, to have investigations, and in the waiting room (intervention group). Students were provided with a structured observation and reflection form to aid their shadowing experience. A focus group was held at the end of their clinical attachment, comparing student attitudes and learning outcomes between the control and intervention groups.

Results:
The focus group highlighted many positive gains from patient shadowing, including better appreciation of the patient journey and greater understanding of patient attitudes toward their illness. Students also quoted more in-depth clinical knowledge and appreciation of consultation skills compared to their control counterparts. Some of the students who didn’t take part in the intervention have arranged to undertake voluntary patient shadowing, having seen the benefits in their colleagues.

Discussion:
All students found the experience overwhelmingly positive. Students have greater appreciation of the patient perspective of healthcare provision and have changed their attitude towards patients in the outpatient setting. Alongside this, students reported enhanced clinical learning, when compared to the traditional outpatient clinic teaching. We hope that this strategy will be employed more widely to enhance student appreciation of the patient perspective during their clinical attachments.

References:

Ref: 176, Friday 23rd June, 10.00-10.20am, Seminar Room 7
Development of a Teaching Module for Trainees: Managing Serious Untoward Incidents
S Sreih, S Flavell, A Duffen, E James, K Haire, A Weigert, E Fellows-Smith, J Hillier
Chelsea & Westminster Hospital NHS Foundation Trust

Background:
There has been increased focus on patient safety and a more recent drive towards using education to achieve this (1). Empowering Junior Doctors with the knowledge of processes surrounding Serious Untoward Incidents (SUIs) and the support structure available is crucial in addressing the second victim phenomenon (2), facilitating learning from incidents (3) and improving their ability to lead their teams in the event of an SUI. It may also facilitate meeting the legal and professional obligations in relation to medical errors (4).

At a London teaching hospital, an educational module was developed aiming to improve Junior Doctors' understanding of processes surrounding SUIs, and improve their ability to manage themselves and their teams following such events. Modelled on a successful workshop for Core Psychiatry Trainees within a local MRCPsych programme, the teaching module followed a doctor’s journey following an SUI, in a safe and interactive fashion. To maximise the number of learners, the intervention needed to be relevant, accessible and replicable across all specialties.

Methodology:
A project steering group designed a half-day workshop, incorporating the following elements: incident reporting, learning from incidents, clinical governance, quality improvement, leadership, medical law, health and probity, and the duty of candour.

The workshop followed a clinician’s personal experience from the time of an SUI onwards. It covered internal governance processes, external processes, and a legal perspective from the Trust Head of Legal. Part of a mock inquest video, kindly provided by the Royal Berkshire NHS Foundation Trust (5), was also played to the delegates. The workshop was piloted within the anaesthetics and the radiology academic programmes, facilitated by clinicians in the relevant departments. A supplementary material pack was provided for later reference.

Pre- and post-workshop questionnaires were completed using a Likert-type rating scale (6) to assess learners’ overall preparedness in dealing with an SUI, and their confidence in their understanding of the processes involved. Delegates completed short reflective pieces summarising key themes and their personal relevance, indicating how this learning will be transferred to the workplace, thus increasing the level of evaluation according to Kirkpatrick’s hierarchy (7).

Results:
There were 10 participants in each workshop. Pre-workshop questionnaires were completed by 9 anaesthetics and all 10 radiology delegates, with post-workshop questionnaires being completed by all 10 of the anaesthetics and 8 radiology delegates.

Overall preparedness in dealing with an SUI (on a scale of 1-10, 1 = not at all, 10 = extremely) for the anaesthetics delegates increased from a mean of 5.4 to 8.0, and from 3.5 to 6.9 for radiology delegates. The reflective pieces highlighted the importance of feeling prepared for these events. The case-based nature of the workshop, the mock inquest video and the legal perspective were particularly well-received.

Discussion:
The workshop produced positive results in improving the delegates’ sense of preparedness in the event of SUIs. Importantly, some delegates fed back an increased feeling of being supported. The development and implementation of this course highlighted the need for this type of training, which seems to be lacking in postgraduate medical curricula, particularly given the high percentage of Junior Doctors involved in SUIs (8).

This workshop is being refined to include an exercise on writing statements and further detail on the incident reporting/learning system. It will then be implemented as a Trust-wide workshop open to Junior Doctors from different departments.

It is hoped this will not only have a positive impact on the experience of Junior Doctors in what is often a difficult time, but also, through normalising involvement in these situations, this will facilitate the development of a culture that is open, supportive and educational.
References:

Ref: S01, Wednesday 21st June, 3.00-3.20pm, Seminar Room 9
Formal recognition of trainers: need for a Named Clinical Supervisor Agreement in Wales
K Webb, A Bullock, C Groves, AG Saayman
Cardiff University

Background:
In 2012 the General Medical Council (GMC) announced its intention to require formal recognition of medical practitioners who are also trainers from 2013 (1). In a move to promote high standards of postgraduate education and training in Wales and to support the GMC’s implementation plan for the formal recognition of postgraduate trainers in secondary care, the Wales Deanery introduced the Educational Supervision Agreement (EDSA) (2). This is a signed agreement between three parties: an individual Educational Supervisor (ES); a Local Education Provider (LEP; the LHB or Trust, i.e. the Medical Director); and the Wales Deanery (the Postgraduate Dean). The expectation is that by raising the standards and professionalising the role of Educational Supervision, ensuring trainers are appropriately equipped to consistently deliver high quality education and training, trainees will develop into doctors with appropriate knowledge, skills and behaviours. Having implemented such an Agreement with ESs, Wales Deanery has turned its attention to Named Clinical Supervisors (NCSs). Likewise, an Agreement for NCSs aims to drive up standards of education and training provided to and by NCSs, those who are directly responsible for the overall supervision and management of a trainee’s trajectory of learning and education progress during a placement or series of placement. The purpose of this work was to scope out whether such an Agreement is needed, indeed wanted, by NCSs and what, if any, issues or challenges may be linked with the development and implementation of formal recognition of NCSs.

Methodology:
We used mixed-methods. Three focus groups were conducted with individuals from a range of specialties at LHBs across South Wales (n=12). A questionnaire (n=155) was distributed at three Trainer and Educator Development Days in Wales (Cardiff, Swansea and Wrexham). Wales Deanery, LHBs and clinicians themselves are currently identifying those who are NCSs. Currently, 289 clinicians are listed on the database as ‘NCS only’. Quantitative data was statistically analysed in SPSS.

Results:
Focus group participants were highly supportive of the proposition of an Agreement for NCSs. They described specific demands associated with the role, clinical specialties and educational needs of supervisors. There was consensus in terms of a focus on minimum CPD requirements to help sift out sub-standard trainers, thereby raising standards of postgraduate education. Most questionnaire respondents (87%) indicated that an Agreement to recognise the role of NCSs is needed, 63% reported they would like see an Agreement separate to that of the EDSA. In terms of outcomes, most indicated they believed an NCS Agreement would professionalise the role (77%) and ensure better access to educational training for the role (61%). The majority reported wanting more feedback on their supervisory role, that an Agreement would enhance accountability for all parties (the Deanery, LEP and Supervisor), provide leverage to negotiate recognition of Supporting Professional Activities time within job plans and more feedback on their supervisory role would be useful (between 84-90% for items). Respondents identified policing of the Agreement as a potential concern. Respondents showed an inclination toward a more robust means of enforcement to ensure compliance, primarily exercised by the LHB or LEP, but also by NCSs themselves.

Discussion:
Focus group participants and questionnaire respondents articulated a need and support for an appropriate Agreement suited to NCSs. Findings inform development of an Agreement fit for purpose which sets out standards and expectations for trainers, with particular focus on the CPD requirements and consideration for suitable learning environments. Respondents wanted a separate Agreement to the EDSA. The draft NCS Agreement differs from the EDSA in regard to CPD requirements and roles and responsibilities of an NCS. The draft NCS Agreement is being piloted within two LHBs in Wales.

References:

Ref: 470, Wednesday 21st June, 3.40-4.00pm, Seminar Room 9
Can we improve patient communication and safety? Using practical training to improve Foundation Trainees’ competence at taking informed consent.

L Anderson, P Fletcher, K Benstead
Medical Education Department - Gloucestershire NHS Trust

Background:
Establishing informed patient consent for procedures and treatment is a core skill which all doctors are required to understand and acquire competence in during their medical training. It is laid out as a fundamental principle of Good Medical Practice by the GMC who provide extensive guidance on the matter which must be adhered to.1,2,3 In our Acute Trust our Foundation Trainees expressed concern over being required to take informed consent for procedures without adequate training or knowledge, raising patient safety concerns.4 Foundation Trainees had no formalised consent training but have related competencies to achieve in their Curriculum.5 As a result, we introduced a structured, practical “Consent Workshop” into their Teaching Programme as an educational intervention. The aim was to gain an understanding of the current guidance on consent, to gain competence at taking informed, procedure-specific consent in a role play setting and to recognise their own limitations at their current stage of training. The secondary aim was to address Trust wide attitudes with the intention of improving patient care.

Methodology:
To establish the concerns raised, entry level knowledge and exposure and attitudes to consent we ran a Trainee focus group. We drew on themes from this to structure the programme whilst understanding that we could not affect the trainee’s limited clinical experience. The educational programme was run as a Consent Workshop introduced into their Teaching Programme, two separate afternoon sessions for FY1 and FY2 trainees. A pre and post questionnaire used confidence scales to establish trainee’s confidence in various areas relating to consent. During the session core guidance and legislation was covered including a specific Endoscopy session. Break out groups for structured one-to-one role-play were then used to establish whether the knowledge obtained could be synthesised and applied to demonstrate the trainee taking informed consent, under the observation of a senior colleague with personalised feedback. The use of role play was to observe the trainee applying the skill in a simulated clinical environment in a supportive, learner centred manner, drawing on the ideas of Kneebone on the acquisition of clinical skills in a simulated environment.7

Results:
The second phase of the programme is due to be conducted and interpretation of the results with evaluation of learning will be presented for both cohorts at the ASM, in the context of current literature. Preliminary results for the FY2 cohort showed reasonable entry level knowledge, a competent performance in the role play exercise with personal reflection on this as a useful clinical simulation, and an overall improvement in confidence for all areas of consent.

Discussion:
The process of taking Consent is a skill which doctors expect to develop and improve during their professional career and clinical experience is a key factor in this, demonstrated by the higher entry level knowledge of our FY2 cohort. There are however expectations that new FY1 doctors should start their careers with a baseline knowledge and competence of this skill, without any formalised training and we challenge the pre-existing attitude of ‘learning on the job’ as adequate practice. We have demonstrated that by tackling this issue we can improve confidence and demonstrate practical role-play skills in a simulated clinical environment which can be directly translated into daily clinical practice. Tackling the issue within our Trust has led to increased awareness and significant changes beyond the teaching. Empowering trainees to have their concerns addressed has led to a change in clinical practice; FY1 Doctors are no longer expected to consent for Endoscopy with the recognition that teaching cannot replace clinical experience. Overall the programme would be best placed early in the FY1 year and has been integrated into the FY1 Induction, so trainees start their careers equipped with the required knowledge, skills and attitudes.

References:

Ref: 411, Wednesday 21st June, 5.00-5.20pm, Seminar Room 9
Fundamental Fundoscopy: Increasing competent use of the direct ophthalmoscope in acute medicine
R Nutt
Great Western Hospital

Background:
Accomplished use of the direct ophthalmoscope is an essential skill in acute medicine for the investigation of various systemic conditions and is a specific requirement of the foundation programme (1). However, it is recognised that clinicians lack confidence in the use of direct ophthalmoscopy (DO) and as a result few perform it, and many who do are unable to reliably detect abnormal findings (2). The purpose of this work is to 1) establish barriers to DO being performed competently in medicine and 2) propose and test a simple teaching session as an effective solution.

Methodology:
A group of doctors working on the Acute Medical Unit were interviewed to gauge baseline use of DO in the department to identify barriers to it being performed competently. In response to this, a bespoke 20 minute ward based “drop-in” style teaching session involving instruction then practice (on eye models with pathology and each other) was devised and tested. Session objectives surrounded 1) recognition of normal/abnormal optic discs 2) use of dilating drops when appropriate and 3) practical skill at visualising optic discs. The session was tested by comparing results of 1) pre and post session assessment of DO ability and 2) by pre and post surveys. The assessments tested ability of participants to distinguish normal/abnormal discs on model eyes and ability to visualise an optic disc in a non-dilated human eye. The surveys used 4-point Likert scales and looked at confidence and attitudes towards performing DO. A follow up survey in 2 months will be conducted to test if change in confidence is sustained.

Results:
A small group of 12 doctors were interviewed to investigate DO usage and barriers. The prominent emerging theme was disillusionment due to perceived difficulty leading to half-hearted or absent attempts at DO. Eight doctors have completed the teaching session so far and the session will run several times in coming months. Initial results: mean confidence (rated from 1-4 on Likert scales) to competently perform DO increased from 1.75 before the session to 3.5 after the session. To the question “would you routinely consider and perform DO when indicated on the ward?”, one participant answered yes pre session compared to all eight participants afterwards. Comparing assessed DO abilities pre and post intervention, number of participants who could correctly distinguish normal from abnormal discs on eye models increased from 6 to 8. Number of participants who were able to locate optic disc on a non-dilated pupil of a peer increased from 2 to 8. Further data will be added, statistically analysed and presented at the conference including results of follow up surveys.

Discussion:
Reports of DO use in acute medicine are worryingly low given its importance in initial investigation of potentially serious conditions. This survey identified a number of barriers to DO use in acute medicine, the most prevalent being lack of self-confidence to perform – a finding consistent with other research (3). Initial results of this work are encouraging. They imply that a simple and practical ward based DO session overcomes these barriers and improves the competence, confidence and enthusiasm of doctors to use this skill in patient assessment. An increase in competent DO use in acute medicine may ultimately lead to increased detection or exclusion of certain serious diseases on initial assessment. Teaching and practice sessions akin to this one are easy to implement and should be actively encouraged on acute medical units.

References:
1. Foundation programme curriculum, 2012
Pan-specialty, pan-regional training for transition induction bootcamps
A Humphreys, P Orchard, R Bamford, J Coulston, S Eastaugh-Waring
Severn School of Surgery

Background:
This programme in its second year was designed to provide an intensive training opportunity offering new specialist trainees (ST3) a full and detailed induction to the region and requirements for succeeding in the programme. For the first time there was a drive to utilize resources across specialties by incorporating General Surgery, Vascular Surgery, Cardiothoracic Surgery, Trauma and Orthopaedics and Neurosurgery.

Methodology:
A three day programme was developed allowing a simulation rich training environment incorporating ward round simulation, cadaveric technical skills training and Human Factors training. This was complemented by regional induction lectures and supported by senior faculty with Educational roles within the region. Each specialty had a programme lead to develop their own specific learning objectives and then shared learning was achieved in Human Factors training and induction lectures to the region. Cadaveric wet lab training was utilized with sharing of these resources.

Results:
In total 5 surgical specialties were involved in the three day training programme involving a total of 28 trainees. Trainee confidence in performing as an ST3, performing technical skills and performing non-technical skills were assessed pre and post bootcamp on a 10 point Likert scale and found to be more confident in technical skills (p=0.0007 CI 95%) and non-technical skills (p=0.0001 CI 95%) having attended the bootcamp. The pastoral aspect of net-working closely with other specialties was an added and unexpected bonus to the programme.

Discussion:
After this programme trainees reported a significantly greater confidence in their ability to perform as an ST3 (p=0.0003 CI 95%) and that the course had a positive impact on their future role as a surgeon. Future work will be to incorporate further surgical specialties as an adjunct for local induction.

References:

Ref: 368, Wednesday 21st June, 4.20-4.40pm, Seminar Room 9
“Educational Advent Calendars” – Valuing our workforce at Christmas. Can combining humour and learning provide an educational opportunity in the Acute Medical Unit?
L Anderson, E Bowen, P Rimmer, E Darvill, N Al-Ali, P Fletcher
Medical Education Department - Gloucestershire NHS Trust

**Background:**
This project was developed to show our Acute Medical Team that they are a valued workforce, and we understand that working under the current pressures in the NHS can be challenging over the festive period and be difficult for personal and team morale. Escalating winter health pressures first and foremost impact on the workload of the Acute Medical Take, these workload pressures risk reducing learning opportunities for our junior team members. The short-term impact on morale is visible but the long-term impact of having an undervalued or disillusioned workforce is significant 1,2. Evidence shows staff who feel valued within their work place are better motivated to deliver higher quality patient care 3. In addition to this we were aware that brief medical educational models such as the ‘One Minute Preceptor’ or ‘Microskills’ approach are well established and could be extrapolated here 4. We therefore proposed a simple intervention in the Acute Medical Unit to improve team morale and provide a unique educational opportunity, the “Educational Advent Calendars”.

**Methodology:**
The advent calendars were hand-made for each AMU in both our Trust’s two sites and installed at the start of December. We will display and demonstrate these calendars as part of our presentation. Following daily morning medical handover, a member of the team would open the dated calendar door and retrieve a medical joke accompanied by a short educational opportunity plus a chocolate reward. The educational opportunities ranged from medical trivia, a short medical quiz to practical tools including a venturi mask to provoke a short teaching session on the concept of the venturi system. The participant opening the calendar door changed on a daily basis. The teaching opportunity was intentionally brief so as not to impact on the handover or the ability of the night team to depart. This works on the established grounds that attention span decays over time, thus a brief intervention can keep a captive audience. The calendar was maintained by our team of post MRCP Post Graduate Educational Fellows who are based on the Unit. The aim was to provide an uplifting environment to start the day, a brief learning tool alongside this, and to see whether creating a positive learning environment can impact on morale during a stretched period in our NHS. Forms evaluating the perceived quality of the educational experience and assessing retained knowledge were distributed to participants.

**Results:**
Participants in our Acute Medical Unit engaged with the Advent Calendars as an educational opportunity. The project visibly improved the team morale from the outset and informal feedback received indicated that individuals and the workforce felt valued and motivated because of this simple intervention. Full results and evaluation of learning achieved will be presented in the context of the published literature.

**Discussion:**
The concept and the calendars were very well received by the Acute Medical Team and gained notice across both hospital sites resulting in approval and citation (in her weekly newsletter) by our Chief Executive. We found that this brief intervention provided us with a humorous atmosphere in which to stage an educational opportunity, and found that introducing humour into teaching can provide a rich learning atmosphere. Alongside this the project gave us an opportunity to focus on the wellbeing and morale of the Acute Medical Team, with the overall intention of demonstrating that they are valued and appreciated. Whilst it is difficult to establish the long-term impact of this project on team morale we would recommend that interventions such as these, which focus on reiterating value and humour in an overstretched NHS workforce are important and unrecognised. We would also propose that in an Acute Medical Unit, where learning opportunities can compete with a busy medical take, brief tools such as these can be a constructive way to facilitate learning for our junior team members.

**References:**
Learning through patient ‘follow-up’: A learning technique described by Foundation Year 1 Doctors working at night.
B Walker, D Gill
Royal United Hospital, Bath / University College London

Background:
This study aimed to explore the educational potential of the night shift for Foundation Year 1 (FY1) Doctors and the factors perceived to influence learning at night. Feedback is an essential part of professional development. Stewart suggests that junior doctors working out-of-hours are more likely to receive feedback on ‘bad’ decisions from seniors but good decisions or borderline decisions with no detrimental effects are less likely to be discussed, thus the learning potential from these decisions and actions may be reduced.

Methodology:
Participants were recruited from FY1 doctors based at a NHS Foundation Trust in the South West. Semi-structured interviews and supplementary written questionnaires were used to explore participants’ perceptions and experiences of the night shift as an educational resource.

Results:
Out of 23 FY1 doctors who met the study’s inclusion criteria, 13 volunteered to participate. After the tenth interview no new themes emerged. Participants described how night shifts provided them with unique opportunities to take responsibility for, and directly contribute to, the care of unwell patients. Supervision, though present, was less visible at night enabling participants to learn to make decisions more autonomously. Provision of direct senior feedback on night shifts was felt to be rare, which was perceived to be due to lack of time and the team’s high workload. Several participants commented that it felt like the only time the night FY1 doctor would receive feedback is if they had made a serious mistake. As a result of the lack of direct feedback, the vast majority of participants described following-up patients that they had reviewed on previous night shifts as a means of evaluating their clinical practice. They described reading through what the daytime registrars or consultants had documented in these patients’ notes in order to appraise their own management plans and diagnoses against those of more senior doctors.

“If you don’t take it upon yourself in your own time to go and see the patient [the next day], you don’t know if what you did was right or wrong” (Speaker 4).

Discussion:
Lack of direct feedback was a key factor influencing the educational potential of the night shift. Almost all participants described the use of clinical artefacts, most frequently patients’ notes, as a means of seeking indirect feedback and self-evaluation. While use of these artefacts may have promoted superficial learning as to whether participants’ overall diagnoses were correct, they might not have been able to provide a deeper understanding into the underlying decision-making processes of their seniors. Participants stated that if the senior doctors’ diagnosis or management plan differed from their own, they then felt uncertain when reflecting on how they might deal with a similar clinical scenario in the future.

There is evidence regarding learning from artefacts in the workplace in general, however this study adds new insight into this method of learning through patient follow-up in FY1 doctors working at night. There is currently no literature regarding the use of patient notes as a learning technique for novice doctors. Questions arising from this study include whether this learning practice takes place in other settings and populations. Furthermore, this practice may reflect a more widespread lack of feedback for junior doctors on patient outcomes once their encounter with that patient has ended, representing an important area of future research. The author is due to present these findings to the Foundation School concerned and is exploring the introduction of a mentoring system for FY1 doctors to provide an outlet to discuss and learn from cases they encounter at night. Entries in patients’ notes could be used as a learning tool to guide discussion but the presence of a mentor may promote deeper learning through more effective, guided reflection.

References:
The lived experience of a junior doctor psychiatry placement
P Crampton, S Beattie, C Schwarzlose, N Kumar, P L Cornwall
Monash University, Australia

Background:
Internationally, there is consistently low intent among medical students and junior doctors to pursue a psychiatry career(1,2,3). Recent policy changes have set the challenge to increase the number of FY1 psychiatry posts by 2017 from currently less than 5% of all FY1 posts to 22.5%(4). The aim of this study was to understand the lived experience of a junior doctor psychiatry placement, and to understand how job components influence their attitudes.

Methodology:
The study was conducted using a phenomenological approach. Semi-structured, one-to-one interviews were completed with 14 Year 1 Foundation level doctors (7 males and 7 females) in the North-East of England. The junior doctors had experiences in a range of psychiatry settings.

Results:
The lived experience of a junior doctor psychiatry placement was understood by three core themes: exposure to patient recovery, connectedness with others in the healthcare team, and subjective interpretations of psychiatry. The experiences were moderated by instances of role definition, reaction to the specialty, and the organisational fit of the junior doctor capacity in the specialty.

Discussion:
The lived experience of a junior doctor psychiatry placement involved many interactions with patients, nurses, and supervisors which influenced their attitude, belongingness, and ultimately how they experienced the placements. The study provides in-depth insights and can be taken forward by educationalists to ensure psychiatry placements are meaningful experiences for all. In addition, it reinforces the messages being found in other specialties that connectedness is important for both job satisfaction and morale, which is currently very damaged within the junior doctor population.

References:
4 Royal College of Psychiatrists. 2015. A Guide to Psychiatry in the Foundation Programme. London: Royal College of Psychiatrists

Ref: 245, Wednesday 21st June, 4.20-4.40pm, Seminar Room 12
Stop making the same mistake twice. Can case outcomes from serious incidents in a Coroner’s court, improve junior doctors learning?
P Rimmer, C Pennels, P Fletcher, K Benstead
Gloucestershire Hospitals NHS Foundation Trust

Background:
The value of learning from serious incidents and error in healthcare is well established and processes exist in all trusts to analyse such instances and identify areas of risk (1). However there is often a perception amongst frontline doctors that this learning is done at a senior, governance level and not fed back to those at the coalface. One trainee survey found less than a third of those who had been involved in a serious incident had received a formal report from their trust (2). Moreover, there is scant evidence about how best to share this knowledge with individual practitioners. The most serious situations can end up in the coroner’s court, so are there recurring themes that can be found at the heart of these cases? If so, it is vital that we learn as much as possible from them. However, an individual’s education is often marred by the stress of the process and seldom shared amongst colleagues. There is a very difficult balance to strike, as we know that both blame and a prioritisation of reassurance over learning can limit development at an individual level (3).

In an effort to improve on this perceived poor transfer of learning through feedback and to recapture lost educational opportunities, a teaching programme for post-graduate doctors in acute medicine was developed using past and on going coroner’s cases.

Methodology:
Intervention 1: Establishing the curriculum
An initial needs analysis and focus groups were performed amongst all junior doctors currently working in acute medicine. The desired learning was integrated with an analysis of recent cases within the trust going to the coroner. Together this information was used to establish a curriculum relevant to those in acute medicine, covering clinical cases, legal and ethical challenges and human factors. Cases were anonymous and those involving current team members were not used.

Intervention 2: Delivering learning
In order to deliver the new curriculum, a series of sessions were performed over the course of a four-month attachment in Acute Medicine. These used existing weekly teaching slots in addition to opportunities outside existing rotas. They included case studies, interactive scenarios, expert tutorials and attendance at current coroner’s cases in an observational capacity. There was also opportunity for open reflective discussion of individual mistakes in a ‘no blame’ environment. Qualitative and quantitative surveys were carried out before and after the process to assess subjective and objective improvement.

Results:
Session delivery is on-going. Initial needs data will be presented alongside completed surveys once the full data collections have been completed. Data to be presented are both qualitative and quantitative regarding development in perceived learning from error, preferred learning methods for this process and understanding of the coroner’s process.

Discussion:
There are often perceived barriers to learning from error, particularly within a busy acute medicine department. By targeting both stated learning needs and using recent pertinent coroner’s cases, we believe that we can increase learner motivation in this area. We are trying to address the breakdown in the transfer of learning from error, from senior to junior level. By making the coroner’s process more familiar we also anticipate being able to reduce the degree of stress associated with being involved in such a case personally.

References:

Ref: 233, Thursday 22nd June, 4.40-5.00pm, Seminar Room 9
Postgraduate Education

The development and psychometric evaluation of a non-technical skills tool for medical post take
ward rounds
S Pomfret
Imperial College and Imperial College Healthcare NHS Trust

Background:
Non-technical skills (NTS) are the cognitive and social skills underpinning medical knowledge and technical skills
needed to contribute to safe and efficient performance (1). They are influential in medical error. Several NTS
assessment tools have been developed, within surgical, anaesthesia, and emergency care. Leading a medical post
take ward round (PTWR) involves a variety of NTS. These NTS are akin to those that new consultants feel
unprepared for (2). No psychometrically robust medical NTS tool exists.

This study describes the development of a NTS tool for leading medical PTWRs and its psychometric evaluation.
This tool will evaluate NTS similarly to the established NTS tools within surgery and anaesthesia. It will also guide
training and improvement within PTWRs.

Methodology:
Systematic literature review formed the basis of the development of a tool based on the NOTECHS tool (3). An
interview study of registrars/fellows/interns, consultants/attendings and patients, expert consultation and
ethnographical work fed into the tool development. PTWR simulation training for senior medical trainees in
preparation for their consultant/attending roles was developed simultaneously with the tool. Doctors of differing
experience levels participated in the simulation, and their performance was evaluated and observed closely. Field
notes by 2 expert observers were discussed and the tool amended where agreement was sustained. The
amendments could be at the level of domain titles or elements within each domain pertaining to leadership on
medical PTWRs. This continued with subsequent simulations until no further iterations were suggested.
The simulation training progressed with clinicians of differing seniority in order for the tool to be validated and
tested for reliability and feasibility.

Results:
The tool has the original NOTECHS domains – ‘leadership/management’, ‘teamwork/cooperation’, ‘problem
solving/decision making’, ‘situational awareness’, and ‘communication skills’. Several of the domain’s elements
were refined during various developmental iterations. For example, ‘role modelling’ was included following the
findings from the interview study, and substantiated on observation. ‘Flow and integration’ was included, and the
‘authority and assertiveness’ definition amended for physicians, from observing experienced clinicians lead the
simulated ward rounds.

Content validity is maximised from the triangulation of resources. Concurrent validity is demonstrated by positive
correlations, using Spearman’s rank correlation - the greater the clinical experience, the higher the score (r=>0.5);
r=>0.6 for leadership and management, situational awareness and problem solving and decision making.
The tool demonstrates good internal consistency for all domains (Cronbach alpha ≥0.9). There is moderate inter-
rater reliability between 2 expert scorers (ICC 0.67-0.8). The tool was found to be easy to use, and well received.

Discussion:
The triangulation of resources and iterative cycle of development provides robust content validation. The
concurrent validity is particularly relevant clinically and educationally. The correlation is strongest for the
‘leadership and management’, ‘problem solving and decision making’, and ‘situational awareness’ domains. These
domains are the ones that are most relevant to training in the final postgraduate years, when communication and
teamwork is relevant from the outset. The tool has good reliability data.
The tool has been effectively used within a PTWR simulation to develop tomorrow’s leaders, helping to bridge the
transition to consultant. Real life use in under way and it has been proposed to include this formative assessment
within postgraduate curricula to ensure renewed education focus on this vital part of a consultant’s role.

References:
2. WESTERMAN, MICHEIL, Teunissen PW, Fokkema JPI, VLEUTEN van der CPM, Schrepbier AJJA, Siegert CEH SF. The transition to hospital consultant
and the influence of preparedness, social support, and perception: A structural equation modelling approach [Internet]. 2013 [cited 2014 Aug 15].

Ref: 226, Thursday 22nd June, 5.00-5.20pm, Seminar Room 9
TIPS: Trainees Improving Patient Safety through Quality Improvement. A peer lead initiative delivering Quality Improvement teaching methodology to Foundation Doctors in the North West

H Baird
University of Lancaster/ Health Education North West

Background:
Medical Leadership and Patient Safety are high on the National Health Service (NHS) agenda. Junior doctors are uniquely placed to provide an input into patient safety and service delivery of healthcare. Furthermore Medical leadership has been highlighted as a core component of medical education after public inquiries into serious failings of healthcare at NHS hospital trusts in England were undertaken. However, there is no formal QI teaching in Curriculum and no standard of QI projects regulated. A survey of Foundation Doctors supported this with 90% of Foundation unfamiliar with the Medical Leadership Framework and 40% unaware of Quality Improvement methodology. 54% were aware that Quality improvement was part of the Foundation curriculum. However 100% felt they would benefit from formal QI training

Methodology:
In response to this a peer lead quality improvement training programme was set up comprising of an Interactive peer lead workshops on QI methodology, through which trainees are asked to work through a problem and find a solution using QI methodology. Initially different formats for the teaching were piloted and adapted based on participant feedback. Further training leads have subsequently been trained to deliver this peer lead initiative. The training was entitled 'TIPS QI' Trainees Improving Patient Safety through Quality Improvement.

Results:
The impact of this teaching was assessed against the Kirkpatrick’s Evaluation of learning.
1. Participant experience: Based on 200 trainee responses, the relevance of the teaching was scored at 8.02/10 (0- no relevance – 10 – highly relevant.). The quality of the teaching averaged 8.27/10. Qualitative feedback identified that trainees overall felt more equipped and likely to undertake a QI project
2. Learning: To assess learning trainees were asked to rank their understanding of QI methodology pre and post session for each component. For all aspects trainees felt their knowledge and understanding improved by over 50% and reduced variation between trainees.
3. Behaviour Change: In an attempt to see if the teaching had modified behaviour we asked if trainees were more likely to complete a QI project post the teaching. The average likelihood prior to the session was 1.7/10 (0- not likely, 10- certain), post the session this was 8.27.
4. Impact: Finally, we saw that sites where the training had been delivered demonstrated an increased number of QI projects submitted as part of Foundation Doctors online portfolio compared to previous years, and to Trusts that did not have the TIPS sessions.

We have also developed TIPS Lead training days, offering Foundation Doctors who have attended TIPS sessions and been involved in Quality improvement, the opportunity to learn more about Quality Improvement methodology and teaching styles to enable them to deliver the sessions to their peers. Currently 6 TIPS Leads have been trained to deliver this teaching.

Discussion:
From the initial start at one Trust in 2014 this project has spread across the North West and Mersey to be delivered to 17 Trusts in 2016/2017 with the support of Health Education North West. Trainees have been engaged and enthusiastic about the project. The peer lead aspect in particular in well received. It is felt it highlights that projects can be undertaken by trainees at their level and not just buy senior members of staff. The TIPS project itself has been run based on Quality Improvement methodology, with continual adaptions and alterations to the teaching based on feedback. Trusts have been engaged with the process and keen support projects from the TIPS sessions. Plans to further develop the project are underway. These involve 3 further sessions throughout the year offering to support trainees undertaking a project of their choice in groups and building links within individual Trusts to support QI projects.

Ref: 202, Friday 23rd June, 9.00-9.20am, Seminar Room 9
Background:
Breaking down anaesthetic training into the number of hours spent providing service provision compared to hours in ‘training lists’; over 50% of our 7 years in training (CT1 – ST7) are spent on call or on nights (i.e. service provision)(1). There is a minimum supervised requirement of, on average 15 hours per week, in lists specific to your module of training(2). Since the European working time regulation was put into place, the proportional amount of time spent providing service provision has increased and trainees are therefore undertaking less elective lists than previously(3). With the new contract, there is a risk that this proportion will increase further and even less time will be spent in training lists(2). This means that when trainees are in an elective training sessions, time is precious and maximum educational opportunities need to be sought. There are plenty of learning opportunities in the emergency on-call work however these are not targeted supervised sessions.
Checklists have been shown to improve patient safety in the theatre environment(4). Can we use this tested method to improve learning in a healthcare environment?
We came up with the idea of introducing an ‘education checklist’ for supervised theatre sessions to formalise learning; maximising teaching and learning in the theatre environment. It formalises; setting learning outcomes, ensuring workplace based assessments can be completed and giving/receiving feedback.

Methodology:
Initially, we sent a short questionnaire survey out to our anaesthetic department; trainees and consultants. We wanted to find out how much teaching and learning is happening in theatre lists. Following analysis of the responses we introduced an ‘education checklist’ including sections for learning objectives and feedback. We will re-survey and see if the checklist has improved teaching and learning in the theatre environment.

Results:
Our initial survey showed that despite most consultants and trainees thinking that learning objectives would be useful (80-95%) they are only set 8-50% of the time. Active teaching happens approximately 30% of the time. Passive learning is happening about 60% of the time during theatre lists with trainees and consultants’ perception of ‘passive learning’ very similar (consultants 59%, trainees 58%). Despite consultants thinking they give feedback about 70% of time, trainees only think they receive feedback on 20% of lists they do. The post-checklist results will be presented.

Discussion:
We think that our checklist will help maximise learning opportunities within the theatre environment, this is necessary to make of the most of those precious supervised sessions allowing maximal use of the 15 supervised hours. We also think that the checklist helps to direct learning to meet trainees needs and it will signpost feedback so trainees can reflect and improve. This checklist could be easily introduced to other specialties and other departments.

References:

Ref: 201, Friday 23rd June, 9.20-9.40am, Seminar Room 9
Towards an understanding of how appraisal of doctors produces its effects: A realist review
N Brennan, M Bryce, M Pearson, G Wong, C Cooper, J Archer
Plymouth University Peninsula Schools of Medicine & Dentistry

Background:
Revalidation aims to reassure the public that doctors are up-to-date and fit-to-practice. (1) Appraisal is a key part of the revalidation process. Approximately 150,000 doctors are appraised annually costing an estimated £97 million per year to the NHS. (2) However the theory of how and why appraisal is supposed to produce its effects is not clear. In particular, how the process of appraisal is supposed to change doctors’ behaviour and improve clinical performance is poorly understood. A realist review of the literature was used to explore these issues as they create context-mechanism-outcome (CMO) configurations, leading to the development of theories; in this case explaining how and why appraisal of doctors works. (3)

Methodology:
A programme theory of appraisal was developed by consulting with key stakeholders in the appraisal process and searching an existing database of research on appraisal of doctors to identify relevant theories. (4) Supplementary searches identified specific theories on different aspects of programme theory. Citation searching was also conducted. Relevant sections of texts relating to one or more aspects of the programme theory were extracted from the included articles and coded in NVivo. A tool was used to classify included articles contribution to the developing programme theory. The coded text were then synthesised using a realist logic of analysis.

Results:
122 articles were included in the review. Three mechanisms were identified; dissonance, denial and self-affirmation. The dissonance mechanism is most likely to cause outcomes of reflection and insight. Important contexts for the dissonance mechanism include the appraiser being highly-skilled, the appraisee’s working environment being supportive and the appraisee having the right attitude towards appraisal. The denial mechanism is more likely to be enacted if the opposite of these contexts occur and potentially leads to game-playing behavior. A skilled appraiser was also important in triggering the self-affirmation mechanism resulting in reflection and insight. The contexts, mechanisms and outcomes identified were however limited by a lack of evidence to reliably further refine the CMO configurations.

Discussion:
This realist review is an important first step in understanding how appraisal of doctors produces its effect. Further research will focus on testing the CMO configurations.

References:

Ref: 066, Friday 23rd June, 9.40-10.00am, Seminar Room 9
Competencies in Practice - A Novel Assessment Method for Postgraduate Physician Training
S Quraishi, W Wade
Royal College of Physicians

Background:
The Royal College of Physicians (RCP) and the Joint Royal Colleges of Physicians Training board (JRCPTB) is in the process of developing the new internal medicine curriculum. An important part of this project involves the development of a supporting assessment system. The present curricula for physician training are based on achieving a large number of individual competencies that are assessed throughout training by a variety of different methods. It is felt that current system is overwhelming and signing off competencies has become a tick box exercise. While the current system is based on achieving a large number of individual competencies, a streamlined one would focus on a smaller number of outcomes, known as Competencies in Practice (CiPs), which reflect the key professional activities of a fully trained physician. These tasks or (CiPs) are known as Entrustable Professional Activities. Supervisors would need to make judgements or ‘entrustment decisions’ about a trainee’s performance in relation to a number of broad observable outcomes of relevance to patient care. Within each CiP there are four levels at which a trainee may be judged to be performing. Ascribing a specific level to each CiP will allow progress to be gauged and to relate progress to what tasks are actually performed in the clinical workplace and the level of supervision that the task must be performed under.

The Proof of Concept Study explored the feasibility and acceptability of using this outcome based model of assessment in a UK NHS setting with the following aims:
1. Whether clinical and educational supervisors are able to make entrustment decisions using the CiPs and levels in a range of clinical specialties and learning environments
2. What types and forms of evidence supervisors require, and trainees feel are necessary, to make such decisions
3. Whether trainees and supervisors find the approach more or less acceptable than the current system
4. Whether the proposed levels are equally meaningful, useful and helpful for all of our proposed CiPs
5. Whether face-to-face training is perceived as helpful to participants.

Methodology:
Participants in the study included trainees (Core Medical and Higher Specialist Trainees), Clinical Supervisors and Educational Supervisors. These participants were self-selected as those who were interested in taking part in the study. Study tools on the nhs e-portfolio system was designed and trainees and trainers were asked to complete the forms that asked participants to use the CiP outcomes method of assessment. Online guides were provided to all participants in order to educate them on how to assess using an outcomes based approach. Face to face training was also provided to some participants. All participants were asked to complete an evaluation questionnaire asking questions related to the aims of the study through SurveyMonkey. A qualitative thematic analysis process was used to code themes identified from the evaluation forms.

Results:
Positive and negative themes were identified from the analysis on using an outcomes based method of assessment. These results from the thematic analysis will be presented along with detailed opinions from trainees and supervisors on this method of assessment.

Discussion:
The Proof of Concept Study has highlighted positive aspects of using an outcomes based method of assessment and we have found that it is a more holistic method of assessment. In addition it rationalizes workload and reduces the 'tick box' culture. There are aspects which we have found that need to be addressed before it can be implemented as a method of assessment for Physicians. The study has highlighted that supervisors and trainees need to be educated in how to practically use this form of assessment when it comes to postgraduate Physician training.

References:
Self-evaluation and peer feedback to promote preparation and participation in small group teaching for undergraduate pharmacists
M Morgan, M, Morgan, D, Morley, B, Merricks
University of Birmingham

Background:
Professional degree courses should equip students with self-directed and life-long learning skills. Second year students on a new MPharm course are required to complete self-directed learning (SDL) worksheets prior to attending small group tutorials (SGT) which are tutor facilitated discussions led by students to explore their understanding of the topic. Student preparation for and participation in the SGT discussion is essential for full exploration of their understanding and for group members to support each other’s development. After the first year we became aware that second year student preparation for and participation in SGTs was variable with some students contributing little or nothing whilst others dominated the discussion.

Methodology:
We developed a tool to encourage students to prepare for and participate in SGTs. Academic staff developed a behaviourally anchored self-assessment rating scale (BARS) (1) for students to use after each tutorial. The highest point on each scale comprised explicit performance criteria that were expected of students with regards to preparation for and participation in SGTs. The rating scales were included in worksheets and students were encouraged to complete them and reflect, in writing, on their self-rated performance and how this could be improved to match the performance criteria at the top of the scale. Students also completed peer feedback to two other allocated group members using a proforma, based on their peers’ preparation for and contribution to SGT discussion including respect and support for other group members. Students were encouraged to use this process to also reflect on their own performance. Additionally, they received similar feedback from a tutor. Participation in peer feedback was voluntary and formative although students only received peer and tutor feedback if they submitted peer feedback. Peer feedback was reviewed by the module lead prior to distribution. At the end of the module students were asked to evaluate the process of the self, peer and tutor evaluation and rate their preparation and participation in SGTs compared to the previous year using a questionnaire. A randomly selected group of students was invited to participate in a focus group further to evaluate their attitudes towards this process.

Results:
62/65 students submitted peer feedback. In general this was of good quality and supportive, though often frank, in nature. 39 students completed the end of module evaluation. 21 (58%) reported completing most or all of the self-evaluation forms. 23 (63%) agreed that "the self evaluation forms helped me understand what was expected of me in the SGTs". 18 (51%) agreed "Completing the self-evaluation form helped me think about how to improve my preparation for the SGTs" and 20 (57%) agreed that "Completing the self-evaluation forms helped me think about how to improve my participation in the SGTs". Students reported significantly increased participation in discussions compared to the previous year. 24 (75%) agreed with "I found completing the Peer feedback form for another student helped me think about my own preparation and participation in SGTs". The focus group reported that the BARS helped them understand what was expected of them in the SGTs and anticipation of peer and tutor review was a motivation to improve their preparation and participation. They reported that the process of writing feedback for their peers encouraged self-reflection on their own performance. They found the combination of perspectives from peer and tutor feedback helpful.

Discussion:
The introduction of behaviourally anchored rating scale for student preparation and participation in SGTs with peer and tutor feedback was associated with improved SDL engagement and participation in SGT discussion. Students report that they found the process supportive and helped clarify staff’s expectations of them as well as encouraging engagement with the module and self-reflection on their learning and engagement.

References:

Ref: 486, Wednesday 21st June, 3.00-3.20pm, Seminar Room 10
Practice makes perfect: An educational package to aid transition from medical student to doctor
C Pascoe, H Patel, IJ Clark, S Taylor, K Herregods, M Khatoon, M Helme, A Nikjooy
Royal Wolverhampton Hospital

Background:
The transition from medical student to foundation year one (F1) doctor is often perceived as a stressful period filled with uncertainty. The first day of junior doctors’ careers is associated with increased patient mortality, a phenomenon coined “Black Wednesday” and publicised both within and outside of the medical community.(1-4) F1 skill-targeted “shadowing weeks” have been introduced to minimise the risks associated with the transition, primarily by familiarising soon to be F1s with their new working environment.(5) Previous publications have largely focused on short, intensive courses providing students with the required knowledge and skills. (6,7) However, there is a lack of literature on the possible benefits of a longer term educational package integrated within the final year of medical school.

Methodology:
Clinical Teaching Fellows at New Cross Hospital have developed an educational package for final year medical students to aid in the transition to F1, targeting specific, relevant skills.
• “Bleep Day”: simulated on call experience with a mixture of high and low fidelity simulation
• Prescribing skills: a comprehensive, dedicated programme focusing on frequently prescribed and high risk medicines
• Communication skills: role-played simulation of commonly encountered scenarios
• Simulated ward rounds: development of documentation, organisation and time management skills
• F1 skills lectures: practical aspects of common junior doctor tasks not covered elsewhere during undergraduate education

Post-programme feedback will be collated to generate qualitative data assessing students’ confidence with tasks required of a competent F1.

Results:
Data collection is ongoing, however, preliminary student feedback has overwhelmingly demonstrated improved confidence (100% of students) and knowledge in F1-specific skills including on-call tasks, prescribing, conducting ward rounds and clinical communication.

Discussion:
Being a competent F1 relies on the integration of a number of clinical and professional skills which have been attained during medical school. Pre-F1 shadowing weeks are unlikely to remediate any skills not yet achieved by final year medical students. In addition, local shadowing often focuses on Trust-specific procedures; this package aims to develop students’ transferable skills relevant for life as a newly qualified junior doctor.
Existing literature on short, skill-specific, focused courses fail to assess the merit of including these sessions over a longer period of time. This educational package is designed to aid the transition of medical student to foundation year doctor using novel, vertically integrated skills-based learning.

References:

Ref: 393, Wednesday 21st June, 3.20-3.40pm, Seminar Room 10
Hitting the Jackpot! Could teaching medical students how to code save hospitals millions?

J Taylor, J Ford, J Greaves, K Jones
Swindon Academy

Background:
A key job of the junior doctor is to document the ward round consultation, examination, and the on-going management plan. Ward round documentation is vital in the coding of the patient notes; the process whereby notes are assigned to generated data points(1). This helps not only to determine the income a hospital receives for an inpatient stay, but has on-going ramifications for audit, mortality indicators, and the restructuring of pathways in healthcare(2). It also enables better sharing of data between teams and leads to better patient care(3).

It is recommended that students at an undergraduate level can demonstrate an “understanding of the basis, application and limitations of the different clinical coding systems in use, including terminologies, classifications and related vocabularies(3)”. Through this, they will better be able to contribute to the smooth running of their team through good written communication between those using healthcare records, and the hospital as a whole.

Methodology:
We devised two simulated ward rounds (one medical, one surgical) which were filmed as a point-of-view perspective for the Foundation year one doctor (FY1). The videos were shown to 6 third year medical students who were asked to document as if they were the FY1 in the clip. Their notes were collected, and they received a teaching session on the medico-legal importance of ward round documentation, how to document and the principles of coding. The students were then asked to repeat the documentation task. Their notes were anonymised, and sent to the coding department for analysis. From this we were able to compare the individual codes assigned to the notes, and the resulting HRG code which determines the tariff, or cost for the hospital. We aim to see an improvement in this value following the teaching. This will be repeated for a second set of third year students, and final year students over the coming year.

Results:
Medical:
There was a difference in the average tariff coded from £460.50 prior to teaching to £670.50 (p=0.26) afterwards. Two sets of notes could not be coded prior to teaching due to a lack of information, but all were coded after teaching. Although not statistically significant at this point in time, the data set was very small, and we hope this will improve with subsequent teaching sessions as more data is collected.

Surgical:
There was negligible difference in the tariffs generated pre and post teaching, with an average tariff of £576 generated pre-session and £577.50 post-session (p= 0.34).

Discussion:
Coding normally reflects the whole of a hospital stay and this was merely a snapshot of what would usually be included in the notes. Although our results were not shown to be statistically significant at this time point, the data is likely to change as more students are given the teaching session.

Further discussion with our coding team revealed some additional qualitative information which was of interest. By the addition of only one or two words to our students’ entries, such as documenting “acute appendicitis” rather than just “appendicitis” the tariff generated for the inpatient stay would have doubled. Although these numbers seem small individually, if we could train a generation of doctors to be aware of these intricacies the potential for financial savings on a large scale is considerable.

References:

Ref: 316, Wednesday 21st June, 3.40-4.00pm, Seminar Room 10
Health Profession Students' and Faculty's Insights into Self Directed Learning and Inspirational Teaching-a Qualitative Study
S Manocaran, JJ Ong, A Chong, S Shyam, PG Patil, SR Sagineedu, CO Leong, A Pau
International Medical University, Kuala Lumpur

Background:
Advancement in healthcare has led to the need for health practitioners who are equipped with lifelong learning skills. Self-directed learning (SDL) ability developed during undergraduate training promotes the development of lifelong learning in practitioners. SDL is more likely to take place through learning activities that simulate or actually represent the workplace. Inspirational teaching (IPT) promotes SDL by motivating students to pro-actively seek learning. The inspirational teacher creates a learning environment that supports constructive feedback and reflection so that students may be inspired to direct their own learning. The aim of this study was to explore (1) students’ perception of their SDL ability and experience of IPT, and (2) faculty’s perception of their students’ SDL ability and assessment of their delivery of IPT.

Methodology:
Two focus group discussions were conducted; one with eight final year students and the other with eight faculty members, stratified by programme of study, i.e. Medicine, Dentistry, Pharmacy and Nutrition/Dietetics, at one university. Potential participants were invited to take part through an email. Those who agreed to participate attended an unstructured in-depth discussion, lasting an hour and moderated by two facilitators. A topic guide that included questions on understanding of engagement in SDL was used. Participants were also asked on the extent to which they had experienced IPT at the university. The discussions were audio recorded and transcribed. The transcribed data were subsequently sifted by two researchers independently to extract salient comments. These were reviewed and were indexed according to the thematic framework developed, and agreed upon with the lead researcher.

Results:
Students’ awareness of learning needs (LNs), simulated and workplace-based learning activities (LAs) and teacher’s role in feedback and reflection (F&R) were themes identified as enhancing SDL. In expressing their LNs, one student reported, “…particular patient coming up…didn’t feel confident enough…prompted me to research further…So that I didn’t mess up in front of patient”. In expressing how LAs enhance SDL, students reported, “…before going for attachment dialysis visit in semester 3…I’d go to read up…kinds of dialysis…types of surgery to be done before we went for the visit”. The role of teachers in F&R helped students to engage in SDL, “feel appreciated for our hard work and…assured our working style and the way we handle our work is correct and it gives us more confidence”.

Discussion:
The finding that students were able to evaluate their learning needs is consistent with the research literature. This awareness of learning needs is triggered by feedback from teachers, or reflection on how well certain tasks have been performed. Learning activities that simulate the workplace environment, such as problem-based learning and case-based learning, or actual workplace-based learning involving patient contact are more likely to enhance SDL. Interactions with peers, family and friends also trigger students to direct their own learning so that they do appear unknowledgeable. The degree of self-directedness in learning varies among students. Teachers, learning activities and social interactions trigger students’ awareness of their learning needs, which in turn motivates them to direct themselves to learn.

References:

Ref: 265, Wednesday 21st June, 4.00-4.20pm, Seminar Room 10
SimCity: London – Novel, cross-institution high fidelity undergraduate medical simulation for the modern training Doctor
S Bulford
University College London

Background:
Over the past decade, high fidelity simulation in medical education has become more widely available (1). An increasing number of medical schools are utilising simulation within their core curriculum, and multiple student societies focused around simulation in medical education now exist (2). It is the case, however, that endeavours in this area have largely involved individuals from only one institution at any one time, as opposed to larger scale events involving multiple parties concurrently. At a post-graduate level, this type of shared learning has been championed, and the broader educational benefit realised (3). It is this which inspired the inauguration of ‘SimCity: London’ – a series of semi-competitive events, involving high fidelity simulated scenarios, between medical undergraduates from across London.

Methodology:
Run as a series of voluntary evening events, teams of six senior medical students represented each London Medical School. Each event, within a high fidelity simulation laboratory, in turn each team was given a brief introduction to their scenario, and a short time to discuss the roles within their team and how they may approach the patient. All scenarios involved the care of an acutely unwell, in-hospital patient. The team then had ten minutes to assess and manage the patient, who’s physiology responded accordingly dependent on applied interventions. On occasion, scenarios ended slightly earlier or later as determined by the progress of the managing team. Each scenario was broadcast live to the audience of observing student participants, their supporters, and an expert faculty. Whilst each scenario played out, the audience collectively gathered feedback using a pre-designed template. Upon completion of the scenario, and remaining under broadcast, the participating team privately de-briefed prior to then receiving feedback from the collective audience and faculty. After all teams undertook a scenario, event feedback was gathered using anonymous data gathering software.

Results:
The response rate to the survey was 100%, with 45 student responses. Participants and observers unanimously reported that this event improved their self-rated confidence in managing acutely unwell patients. Respondents also felt the experience helped improve their understanding of communication within teams caring for acutely unwell patients. Respondents stated that their ability and confidence to give constructive, meaningful feedback also improved. All participants stated they were engaged by the format and enjoyed the event, with a strong desire to participate in future events.

Discussion:
We hope to rotate SimCity: London around each London Medical School, thus creating a ‘league’ of friendly competition between institutions. We plan to broaden the variety of pathologies within each scenario, and increase the focus on ethical challenges in emergency practice. We aim for students to write scenarios for each other, adding a further educational benefit through the increased role of the student as the teacher. Equally, we hope students may design and implement feedback tools and strategies so as to improve this crucial art. The real challenge is to incur translational benefit of this learning environment into the clinical environment in order to improve patient care. However, in order to do so this format and learning will need to be scalable to reach all students rather than a self-selected cohort of each medical school.

References:
2- https://www.qmsu.org/groups/15294/ (last visited 09.01.17)
Obstetric emergencies in the developing world: does simulation training improve healthcare professionals’ knowledge and confidence in looking after patients with postpartum haemorrhage and eclampsia?

E Caplan, J. Taylor, J. Moffatt, D. Majumdar, M. Natarajan
University of Bristol

Background:
A key objective in the United Nations’ Millennium Development Goals was improving maternal health; however, maternal mortality remains a major public health issue worldwide, especially in Sub-Saharan Africa. Barriers to accessing healthcare are undoubtedly prevalent in developing countries; evidence suggests that strengthening obstetric emergency care through simulation-based training provides a promising means to improve maternal outcomes. The aim of the study was to explore the efficacy of obstetric simulation-training for postpartum haemorrhage (PPH) and eclampsia in two rural hospitals in Uganda.

Methodology:
The simulation-training model consisted of a half-day session, comprising two simulation scenarios adapted for a low-resource setting from the PRactical Obstetric Multi-Professional Training (PROMPT) course, followed by an interactive discussion of clinical management algorithms.(1) Questionnaires completed before and after assessed subjective improvements in knowledge and confidence as well as participant views. Participant characteristics were also analysed.

Results:
73 participants completed questionnaires. Significant improvements were reported both in knowledge and confidence for PPH \(t(52)=5.124\) for knowledge and confidence in those without previous training. However, previous PPH training had no significant impact on changes in PPH knowledge or confidence. 100% of respondents reported that training met their expectations, while 97% indicated they would value future training in managing obstetric emergencies.

Discussion:
This simulation-training programme covering PPH and eclampsia was effective in improving participants’ knowledge and confidence. Training appeared to be more successful in those with less previous training. This study adds evidence for the efficacy not only of simulation training in developing countries, but also of the benefits of a low-cost, time-efficient simulation training model.

References:

Ref: 084, Wednesday 21st June, 4.40-5.00pm, Seminar Room 10
Understanding The Art of Clinical Decision Making
BJ Sieniewicz, K Collins
King’s College London

Background:
One of the most fundamental skills required of a doctor is clinical decision making (CDM) “a balancing act – of art and science, intuition and analysis, gut instinct and evidence, experience and knowledge”1. “Doctors must be capable of assessing and managing risk and have the ability to work outside protocols when circumstances demand”2. However, few medical curricula provide education in CDM4. Research supports the view that clinical decision making can be taught 5 and diverse variety of approaches have been suggested in order to improve CDM 6. Our local Professional Support Unit (PSU) found that around 10% of trainees were referred to their service due to perceived issues with CDM and sought a way to avert similar referrals in the future.

Methodology:
Study approach
This qualitative study examines the effectiveness of a pilot programme at improving CDM ability. The findings can be used by clinical educators who all have responsibility to provide support for trainees in CDM.

Study population and sampling
A two-hour workshop for FY2 (Foundation Year) doctors was devised. In total 50 trainees attended. Multiple sources of data were collected and thematic analysis was performed to compile a case study.

Data Analysis
Thematic analysis was conducted manually to compile a case study. Five areas were chosen for further discussion.

Results:
1. Trainees’ entry level understanding of CDM
   Trainees had a better than expected understanding of CDM.
2. Awareness of human factors and bias
   Trainees were readily able to identify a range of human factors and “biases” which could influence their CDM ability.
   The concepts of confirmation bias, awfulisation and fast and slow thinking were also raised by the trainees.
3. Specialities which accelerate CDM maturity
   Trainees who had completed rotations in Psychiatry, Emergency Medicine (A&E) or General Practice (GP) seemed to have a clearer definition of CDM at the outset of the session and more confidence in making decisions independently. They provided incisive commentary and appeared to have a more advanced decision making ability.
4. The CDM Model
   Employing a CDM model did not appear to help trainees clarify a way forward when faced with a challenging decision. Trainees were, however, keen to consider frameworks that could be used to improve decision making, rather than a model which simply describes the processes already used.
5. Vocational Training in CDM
   One recurring barrier to learning was difficulty asking why a management strategy had been selected without seeming rude or appearing unknowledgeable. This difficulty in harnessing the learning potential offered by senior clinicians implies that the educational value of supervised clinical encounters is not being fully maximised.

Discussion:
The PSU had anticipated that this group of junior doctors might possess a more limited understanding of CDM given the early stage of their training. However, both observers and facilitators felt that most trainees had a better understanding of CDM than anticipated

Picking the right trainees
Our results however, refute this and a more useful strategy for the future may be to proactively identify trainees who require further input and schedule targeted sessions.

Specialty vs Support
Early exposure to CDM in a supported environment is critical to the maturation of a trainee’s decision making ability.

GET REAL When Making Decisions
Another option would be to equip all trainees with a structure to fall back on when they do face a challenging decision. We recommend the GET REAL tool.

Conclusion:
CDM needs to be as diverse as the patient and in this sense, is both an art and a science. Senior clinicians can do much to facilitate opportunities for trainees to exercise their decision making ability in a supportive environment. This requires a commitment from trainees to actively participate and trainers to allow junior colleagues the opportunity to fully benefit from their experience.

References:

Ref: 074, Thursday 22nd June, 5.20-5.40pm, Seminar Room 11
Mind The Gap
E Sullivan, Rachel Lindley
University of Manchester

Background:
Whilst there is a wealth of policy and law which makes explicit the medical students duty to raise a concern (1,2,3,4), including the call to be the ‘eyes and ears’ in a workplace (5) both students and staff recognise numerous barriers to this (6).
This project explores the reality of raising a concern in a large UK medical school. It describes the support available for students to raise concerns and their experiences; then contrasts this with what the faculty and other stakeholders perceive.

Methodology:
An action research approach was used to explore the raising concerns process as perceived by faculty members, placement tutors and students. This included one to one interviews with tutors and students to discuss enablers and barriers, focus group discussion with students and a faculty workshop. Data was also gathered from other sources including the department of health, other medical schools and regulatory bodies.

Results:
Faculty, academics and students understand the importance of raising concerns and its direct relationship with patient safety. Whilst academics think students know how to raise concerns and are supported in this process, many students are unsure of the process and do not raise concerns that they have. When students have raised a concern and perceive they have felt unsupported or had a negative impact on their professionalism they not only claim that they would not encourage others to raise concern and also would never do it again. The reasons why medical students don’t raise concerns are complex and include confidentiality concerns, awareness of hierarchy, inexperience, hidden curriculum, uncertainty around the validity of concern and difficulties with process.
There is a mismatch between academics and students perceptions of raising concerns. Suggestions for solutions to address the mismatch will be proposed and initial evaluation of these will be shared.

Discussion:
Faculty support to encourage medical students to raise concern is vital for patient safety. The process to enable this to happen is crucial via a clear and supportive message process from faculty that must be easily accessible to students at times of need.
Combining and building on current good practice with the student voice, the author has developed an online tool. This sits as a platform for information and options to support and empower students in this process so they can select their preferred option.
The crucial elements for the success of this will be shared and evaluation of the success of the strategy offered.

References:

Ref: 419, Thursday 22nd June, 4.00-4.20pm, Seminar Room 12
A resilient curriculum or a curriculum to develop resilience: how do medical students learn about managing stress and developing emotional resilience?
C Evans, J MacDonald
Cardiff University

Background:
Medical students and doctors suffer higher and average levels of stress, anxiety and depression1. There is a renewed focus on stress and development of emotional resilience in the field of medical education2. It has long been argued that the capacity to develop self-awareness and emotional resilience should be viewed as professional capabilities3. The General Medical Council has now stipulated that undergraduate medical curricula should focus on self-management as part of generic professional capabilities 4,5. However, there is a lack of clarity and agreement about how these topics should be taught.

Methodology:
We conducted a study aiming to explore the question of how medical students learn strategies for managing stress and developing emotional resilience. A cross-sectional study using qualitative methods was conducted. Year 1 and Year 5 medical students from Cardiff University School of Medicine kept electronic diaries noting usage of techniques and sources of learning. In addition, students participated in four focus groups. Focus groups were transcribed in full by CE and data were analysed using inductive thematic analysis and key themes suggesting learning were identified.

Results:
Students appear to learn techniques in a number of ways. A significant amount of learning in this area occurs prior to attending medical school. The topic was touched on in the formal curriculum in professionalism workshops. Some learning was self-directed but the key modes of learning identified were reflective learning (triggered in a variety of ways) and learning by interacting with and observing others (particularly positive and negative role models and trusted individuals).

Discussion:
As the concept of professionalism evolves, so must the design of undergraduate curricula to reflect this. The present study suggests that role modelling and reflective learning are potentially important modes of learning in this area. Curricula need to include discussion of the evolution of professionalism as a concept. Given that role modelling and reflective learning are already intrinsic to most medical curricula, a shift of focus to include stress and resilience may be effective. Students should be encouraged to discuss these issues with educators and peers. Reflective portfolios could be extended to include reflections on overcoming times of stress and difficulty.

References:

Ref: 310, Thursday 22nd June, 4.20-4.40pm, Seminar Room 12
Undermining behaviour and bullying: Are these issues encountered by medical students as well as doctors?
K Warren, K Jones
Swindon Academy

Background:
‘Undermining behaviour and bullying’ refers to any behaviour that can be thought of as “offensive, intimidating, malicious or insulting” (1). Within the healthcare system, this can lead to a reduction in patient safety due to detrimental effects on teamwork and communication (2). In 2014, 8% of doctors in training reported a personal experience of such behaviours, with 13.6% reporting that they had witnessed such events (2). To date, only one study has addressed this issue in medical students in the UK. Timm (2014) reported that 18% of medical students on their first clinical placement had experienced or witnessed such behaviour (3). It has been suggested that an “authority gradient” may exist here, and that individuals may be more likely to experience undermining behaviour and bullying the further down the medical hierarchy they are (4, 5). We aim to investigate this further and to ascertain whether the incidence of such behaviours changes as medical students progress through their training. We also wish to identify whether there is a correlation with specific clinical placements or environments.

Methodology:
An online survey has been developed and will be distributed to all clinical students at the University of Bristol. The students’ participation will be voluntary and all results anonymised. Questions asked will ascertain the incidence of undermining behaviour and bullying, as well as the specific nature of the students’ experiences and any potential barriers to reporting such behaviour. Free-text boxes will be included for students to further expand on their experiences of undermining behaviour and bullying.

Results:
Descriptive statistics will be presented. Thematic analysis will also be performed and is intended to explore the specific nature of bullying incidents encountered.

Discussion:
We hope to identify whether or not the incidence of undermining behaviour and bullying changes depending on medical students’ year of study, according to the “authority gradient”, and whether or not clinical placement plays a role. Undermining behaviour and bullying can have significant effects on self-esteem, delay progression through training, and ultimately affect patient safety so it is essential we detect, and address, such issues at an early stage.

References:

Ref: 216, Thursday 22nd June, 4.40-5.00pm, Seminar Room 12
Resilience workshop: can simulation be used to open a dialogue on the difficulties encountered as a foundation doctor with the aim of reducing stress and preventing burnout?
H Fuller, R Rooney, J Morgan
North Bristol Academy

Background:
The transition between medical student and junior doctor is inherently stressful, not just because of the clinical challenges and workload but also the emotive nature of the jobs encountered. There has been increasing interest, around what makes some junior doctors more resilient to these inerrant difficulties and more able to maintain their own wellbeing. Resilience is defined as “a capacity to face and overcome adversities, with personal transformation and growth”. (1) Is this something that can be taught?
The GMC states that foundation doctors must “demonstrate that they recognise personal and professional limits, and ask for help from senior colleagues and other health and social care professionals when necessary” (2). Current literature recommends medical educators should highlight the importance of stress management and that training in self-care might increase resilience. (3,4) However, many doctors start work without any experience of the stressors that they will be encountering on a daily basis, making it difficult for them to recognise when they are reaching their personal limits or how to react to the stress.

Simulation is used regularly and with good effect to teach doctors to manage acutely unwell patients, could it also be used to give students experience of the stresses of being a junior doctor? In our opinion simulating a difficult day at work might offer an opportunity to discuss stress management as well as time for them to reflect on their wellbeing.

Therefore, the aim of our study is to offer the students a chance to experience and explore their personal reaction to the pressures of a junior doctor using simulation and help them consider what tools they might use to recover.

Methodology:
We will run a workshop comprising of two sessions. The first as a seminar in which we will discuss the concept of mental wellbeing, potential stressors working as a junior doctor and ways in which different people deal with stress. We hope this will give the students an opportunity to consider the difficulties they might encounter and how they might deal with them. The second will be a simulation session with 5 stations lasting 10 minutes. Each station will be a common clinical encounter of a foundation doctor, done individually and run in similar style to an OSCE.

Following this will be a group debrief with two facilitators and all the students taking part in the simulation session. During the debrief the focus will be on their emotional response to the scenarios and explore their thoughts on this and the impacts that could have upon them. Any clinical questions will be answered and an information pack with useful tips for each of the scenarios will be given to all the students.

Results:
We will ask the students to complete a questionnaire on how they deal with stress prior to the workshops as well as getting them to complete a resilience score questionnaire both before and after the workshop. We will compare these scores to see if the workshop alters their ideas about dealing with stress and their resilience to it.

We will follow the students up with the abbreviated Maslach Burnout inventory once they have started working, we the scores from this inventory with a group of foundation doctors who were not involved in the workshops.

Discussion:
It is an open debate as to whether resilience is something that can be taught. We are keen to explore the use of simulation to facilitate the student’s exploration of potential stressors when they start working, having the opportunity to normalise this and considering coping strategies with the aim of developing junior doctors with potentially more resilience

References:
2. Outcomes for provisionally registered doctors with a licence to practise (The Trainee Doctor). GMC. July 2015
4. Moir F; Henning M; Hassed C; Moyes SA; Elley CR (2016) A Peer-Support and Mindfulness Program to Improve the Mental Health of Medical Students. Teaching & Learning in Medicine. 28(3):293-302

Ref: 211, Thursday 22nd June, 5.00-5.20pm, Seminar Room 12
Perceptions of cheating in a UK medical school
N Hrouda, T Roberts
University of Leeds

Background:
The General Medical Council emphasises that developing academic integrity is fundamental to the role of future doctors. However, research suggests that cheating in medical schools is a concern worldwide(1). A UK study found that a third of medical students admitted to cheating at least once in their undergraduate education and an even higher prevalence has been reported in other countries(2, 3).
Cheating can take many forms—from copying another student’s answer in exams to plagiarism. In recent years, students’ use of cognitive enhancing drugs has also been regarded as cheating by some academics(4). Research from the US has revealed that some medical students are using psychostimulants, such as methylphenidate, to enhance their academic performance(5). This behaviour may have harmful effects on students’ personal and professional development.
Previous studies have used anonymous surveys to examine cheating in medical education(1). However, these quantitative methods may not reflect the complexity of students’ perceptions of cheating.
This qualitative study aimed to explore which cheating behaviours are perceived to be more serious than others and how participants justify these views. Medical students’ use of cognitive enhancing drugs has not yet been researched in the UK; therefore this scenario was included in the study.

Methodology:
A total of 13 participants attended a single 40 minute semi-structured interview. The participants consisted of medical students in their 1st and 4th year of study at University of Leeds. The intention was to compare the opinions of new medical students to well-established students whose attitudes may have been shaped by the culture at the medical school. The study also included 5 members of staff who are involved in medical students’ education at the university. During the interview, participants were asked to place 6 hypothetical scenarios on a numberless scale from ‘definitely not cheating’ to ‘definitely cheating’, and then justify their decision. The scenarios included use of caffeine tablets, use of methylphenidate, access to an expert family member, OSCE station sharing, reading an example essay from another student and collaboration. Hypothetical scenarios were used to stimulate discussion around cheating whilst protecting participants from disclosing any incriminating information about themselves or others. The interviews were recorded, transcribed and analysed using thematic analysis.

Results:
For the most part, medical students and staff had a similar understanding of the scenarios. Participants tended to place the scenarios about having access to an expert family member or using caffeine tablets in the ‘definitely not cheating’ side of the spectrum. OSCE station sharing, reading another student’s essay and collaboration were generally viewed as more serious forms of cheating. Year 4 students were more lenient about OSCE station sharing compared to the year 1 students. Use of cognitive enhancing drugs stimulated significant debate during the interviews. Participants used complex reasoning processes in the interview. Participants considered the fairness of the action itself as well as the wider context of the action; such as the student’s underlying intentions, the medical school guidelines and society’s values. Faculty were also concerned about the impact of the student’s behaviour on future practice.

Discussion:
Staff and student participants had similar perceptions of the seriousness of the scenarios, which implies that faculty’s values were aligned with their students’ attitudes. However, the use of cognitive enhancing drugs in the context of cheating inspired a wide range of opinions from participants. There is currently little public debate on this topic; therefore the lack of a society consensus might explain this discrepancy in views.
This study has identified that defining the boundaries of cheating is complex, and therefore students and staff may need clearer guidance about academic misconduct from academic policy.

References:

Ref: 190, Wednesday 21st June, 3.00-3.20pm, Seminar Room 12
“being the youngest... female on the team can be quite intimidating”: Exploring intersecting identities, retention and success in health professions education

A K Verma, C Rees, L Monrouxe, R Ajjawi, S Schofield
University of Dundee

Background:
Equality legislation across the UK and elsewhere has driven the health profession sector to develop and operationalize workplace equality and diversity policies (1-4). However, research literature has identified inequalities within the healthcare workplace, as reported by students/staff during their professional training. Specifically, trainees’ intersecting identities (gender, age etc.) adversely interplay with their learning experiences (5-7). Adverse learning experiences (e.g. discrimination, abuse) are noted to impact students’ retention and success (8). The literature thus far only offers general recommendations to improving students’ retention and success, rather than exploring and understanding how identities, retention and success interact with one another. This project aims to explore which and how intersecting identities, retention and success interplay, with a view to enhance and develop policy and practice for a diversifying health professions education and workforce.

Methodology:
Underpinned by social constructionist and intersectionality approaches (9,10), we conducted a secondary analysis on 2,261 professionalism dilemmas from across the UK, Australia and multiple health professions. We conducted a multi-site longitudinal audio diary (11) study across the UK, to explore health professional students’ workplace learning experiences in the context of male- and female-dominated environments. A combination of cross-sectional and longitudinal qualitative analysis was conducted (i.e. thematic and narrative analysis).

Results:
Participants highlighted how their gendered identities may put them at a disadvantage in gender-discordant contexts (e.g. female student in orthopaedic surgery). Participants narrated multiple intrinsic and extrinsic enablers and barriers that influenced their retention and success in their workplace learning. For example, discrimination as a barrier to students’ engagement in workplace learning, or student’s identifying male and female staff (i.e. consultants) as factors influencing their future career decision making.

Discussion:
Underpinning educational policies and practice with intersectionality may have more impact in meeting the needs of equality and diversity in the health professions education. Furthermore, sensitising students to how their intersecting identities interplay with their workplace learning experiences may be valuable to developing their professionalism as part of a diverse healthcare workforce.

References:
Experiences in Wellbeing and Mindfulness Education at Warwick: a mixed methods study
S Stewart-Brown, A M Feeley, M Cader, S Janjau, E Hanson, S Stewart-Brown
Warwick Medical School

Background:
The mental health of medical students is a cause for concern and mindfulness has been proposed as a possible solution [1] Warwick Medical School introduced a new Personal and Professional Education (PPE) course in 2013. Beginning in week 1, the course introduces the idea that mental wellbeing is important for student resilience and health as well as for the practice of medicine. It offers exposure to approaches that could help develop resilience. The entire cohort is invited to participate in brief mindfulness sessions, introduced to self-reflection, wellbeing plans, learning styles and group working. The school also offers a Student Selected Component Module in Mindfulness in year 1 and supports an active student led Mindfulness Society. This aim of the evaluation was to examine: change in mental wellbeing and mindfulness; predictors of change; student experiences of the course; and the extent to which students were practicing mindfulness or looking after their wellbeing in other ways.

Methodology:
Students self-report on their mental wellbeing (WEMWBS[2]) and mindfulness (Freiberg Inventory[3]) as part of the course and scores are tracked over 15 months. In the summer of 2014, 13 students from the first cohort participated in qualitative interviews which have been thematically analysed. The first two cohorts through the course completed an online questionnaire about the course (response rate 30%). Half termly anonymous evaluation of all teaching offered the opportunity to comment on any aspect of teaching. Responses relating to the PPE theme were collated. Regression analysis was used to estimate predictors of mental wellbeing at each time point and repeated measures mixed model analyses to assess predictors of mental wellbeing over time.

Results:
Quantitative evaluation in 2013 and 2014 cohorts shows a consistent decline in mental wellbeing during the first 6 months, with between 45% (cohort 1) and 55% (cohort 2) of scores indicating possible depression at that time. Some, but not complete recovery occurred by 15 months of the course. At one year, 60% of students reported practicing mindfulness but most practiced less than once a week. Overall mindfulness scores decreased during the course. Time series analysis showed change in mindfulness scores to predict change in mental wellbeing, indicating that mindfulness protected students from the decline in mental wellbeing. Qualitative data suggest that receptivity to the course changed positively over time and that interest in studying mindfulness increased. Most students (94%) reported some personal wellbeing practices by the end of the course, with some taking up other activities (eg ballet) to protect their wellbeing. Students’ experiences of the course depended on the skills of the facilitator for their group sessions. A small proportion of students reported some personal wellbeing practices by the end of the course, with some taking up other activities (e.g., ballet) to protect their wellbeing.

Discussion:
All students in the school now know about mindfulness and its potential contribution to wellbeing and medical practice. The great majority of students are taking some responsibility for looking after their wellbeing. Some students in each cohort are actively practicing mindfulness, and more would like to do so. There is some evidence that mindfulness protects student’s mental health. Challenges to successful provision are time pressure, both in terms of the curriculum and student attitudes and expectations, size of the groups students are taught in and skilled facilitation. Faculty development to enable the latter is necessary, but not easy to achieve. Evaluation is challenging in the current climate and the conclusions of this study are limited by the low response rate to the on-line questionnaire, possible bias in selection of interviewees and incomplete capture of mental wellbeing and mindfulness data. Conclusions are based on data from two consecutive cohorts using a range of methods strengthening confidence in the results.

References:

Ref: 123, Wednesday 21st June, 3.40-4.00pm, Seminar Room 12
For want of a better word – developing a taxonomy for the teaching and training of end-of-life care from a scoping review of UK medical literature
S Qureshi, A Dewar
University of Edinburgh

Background:
Learning to care for patients approaching the end of life is challenging but essential for medical practice(1). New medical graduates play a significant role in care of dying patients and so this is a priority for medical education(2). There are significant challenges involved, including conflicting understandings of complex concepts surrounding this area of medical practice(3). This is particularly important as clear communication with patients with life threatening diseases (e.g. about their wishes and their prognosis) has been emphasised(4,5), which clearly requires the doctor to have a thorough understanding of the patient journey towards the end of life. This study aims to explore and map the key terms and concepts discussed in the UK academic medical literature which described care of patients approaching the end of life, and apply the findings to develop a taxonomy from which future medical teaching on these issues can be informed.

Methodology:
An iterative scoping study design(6) was adopted, allowing various sources and evidence types to be drawn upon in order to explore a complex area. The review sought to identify research and non-research papers and documents relevant to UK doctors which used language to describe medical care for patients approaching the end of life, and were published from 2006-2016. The review incorporated 3 stages:
1. Initial review of relevant texts known to the authors in order to generate search terms and inclusion criteria
2. Comprehensive literature search of databases (EBSCOHost; Web of Science; PubMed; Cochrane Library), clinical guidelines (NHS, SIGN, NICE, Scottish Palliative Care) and other professional resources (GMC, Department of Health, The Scottish Government). Identified papers were reviewed by both authors and included or excluded according to the criteria established in stage 1. Uncertainties and discrepancies were discussed within the research team until a consensus was reached
3. Extraction, categorisation and analysis of data from included papers, aided by the qualitative research package NVivo.

Results:
3303 papers were originally identified from the literature search (stage 2) and 287 papers were included in the final analysis (in stage 3). Multiple terms were found to describe care for patients approaching the end of life. Publications only rarely provided explicit definitions, and in other cases the meaning was interpreted from the contexts in which they were used. Analysis led to development of a taxonomy of terms including: ceiling of care; limited reversibility; active treatment; supportive treatment; palliative care; palliative needs; ceilings of care; advance care planning; the good death. These terms, the concepts they represent, and how they sometimes conflict and overlap, will be presented.

Discussion:
This study benefited from its comprehensive and systematic design. It was limited by potentially subjective decisions about which papers were likely to be relevant to doctors and medical practice – however the authors plan to carry out a consultation with doctors who often care for deteriorating dying patients, across a range of acute specialties, in order to mitigate this limitation and ensure the taxonomy bears true UK clinical practice. This consultation exercise is a recommended stage in a scoping study to allow the findings to be informed and validated(6), and will likely lead to refinement of the taxonomy. It is believed that this developing taxonomy will help lead to clearer understanding for medical students and trainees of the key concepts in learning to care for patients approaching end of life.

References:
Exploring the use of item statistics based on negatively marked scores and dichotomised scores
J Cockerill, M Roberts, E Gabe-Thomas, D Zahra
Plymouth University Peninsula Schools of Medicine and Dentistry

Background:
Historically, the majority of multiple choice tests in undergraduate medical and dental programmes in the Peninsula Schools of Medicine and Dentistry (PSMD), and previously in Peninsula College of Medicine and Dentistry (PCMD), have been marked using negative scoring. Test items are single best answer with five options and a ‘don’t know’ response, scored -0.25 for an incorrect response, 0 for a ‘don’t know’ response and 1 for a correct response. However, item performance statistics produced by the psychometric team and provided within assessment and item analysis reports, have been derived by dichotomising this score data (incorrect responses are re-scored as 0). Item performance statistics are used as indicators to flag items for review at post-test meetings, forming part of the assessment quality assurance process designed to ensure that tests are reliable, valid and fair 1. Guidelines for interpreting the values of these statistics in dichotomously scored (also known as number-right scored) tests are given by numerous authors 2-4. Similar guidelines for statistics based on negatively marked scores are not available as the distribution of such statistics varies according to the particular scoring method employed.

Of particular interest in this study are two performance statistics; the item facility (also called the item difficulty) and the corrected item point biserial correlation. Using negatively marked score data, the corresponding statistics would be the item mean score and the corrected item-total correlation. This study examines the consequences and feasibility of employing these latter two statistics to flag items for review.

Methodology:
Score data was gathered from academic year 2015-16 spanning three different years of study, three different programmes and two different test types (progress tests and in-year tests). For each data set (test) statistical analysis was carried out on the negative score data (actual data) to provide the item mean score and the corrected item-total correlation, and the (modified) dichotomised score data to provide the item facility and corrected item point biserial correlation.

The Pearson correlation coefficient was calculated to provide the linear correlation (strength of association) between a) the item mean score and the item facility and b) the corrected item-total correlation and the corrected point biserial. Paired values were plotted and regression based estimates were used to establish thresholds equivalent to those currently used for item screening. The effect this would have on items which would be flagged for review was examined.

Results:
For all tests there was a strong positive correlation between the item means and the item facilities (average Pearson r = 0.996; range 0.994-0.997) and between the item-total correlations and the item point biserials (average Pearson r = 0.975; range 0.957-0.988). Statistics based on the negatively marked scores were slightly more effective in identifying items that were ultimately dropped from the tests.

Discussion:
The study showed that the item statistics based on negatively marked scores were closely aligned to those based on dichotomised scores. The latter may be easier for faculty to understand; for example, a facility of 0.20 indicates that 20% of students answered the item correctly, whereas the item mean of 0.07 is less straightforward to interpret. This ease of interpretation may outweigh the increased effectiveness of using the item statistics based on negatively marked scores.

References:

Ref: 418, Thursday 22nd June, 5.20-5.40pm, Seminar Room 10
What demographic and educational factors predict doctors' decision to apply for General Practice specialty training?
P Lambe, M Roberts  T Gale
Plymouth University Peninsula Schools of Medicine and Dentistry

Background:
Research indicates that influences on decisions to apply for postgraduate training programmes in particular medical specialties are multi-factorial and that, in the UK, general practice is one of the least competitive specialties 1-5. Under-recruitment into general practice has become a major issue and UK medical governing bodies have called for a clearer understanding of the characteristics influencing career trajectory and the differential general practice workforce output among UK medical schools 6. The UKMED database is a recently created repository that links individual-level data on doctors’ social background, secondary schooling and pathway through medical education. This data provides a unique and valuable opportunity to add to our understanding of specialty training choices by permitting analysis of a large cohort of doctors on a range of factors which may influence those choices. Research in this area is important for informing workforce planning, specialty training programme provision, medical school course design, methods of selection to medical school and the widening participation agenda, in order to encourage a better match between graduate career choice and service need. While most research in this area has analysed specialty career intentions prior to the point of application to training programmes our study has been able to analyse data on the applications actually made by doctors. We aimed to identify the socioeconomic and educational factors most strongly associated with the decision to apply for GP specialty training.

Methodology:
A retrospective quantitative analysis of the choices made by doctors who, in 2015, made their first application for specialty training. Logistic regression was used to determine the likelihood of application to GP specialty training. Independent variables examined included a range of background measures derived at entry to medical school and beyond (personal, family, academic, medical school, Foundation Deanery). Typologies, based on profiles of values for significant independent variables enabled insight into which configuration of factors were substantively important in influencing the outcomes. Analyses were conducted on the whole sample (n=7634) and on the subsample of doctors who had studied medicine on Standard Entry Programmes, excluding graduate entrants, (n=5540).

Results:
Doctors’ applications to GP specialty training varied considerably by medical school and Foundation School attended. Positive univariate predictors of the outcome included; female, low socio-economic class, Black and Minority Ethnic (BME) group, state school educated, childhood in an area of high deprivation, and graduate entry to medical school. Negative univariate predictors included; performance in the UK Clinical Aptitude Test, intercalation during medical school, performance at medical school and at Foundation School. The predicted probability of applying to GP specialty training for a state educated, low social status, BME female who had not intercalated was 0.57 (95% CI 0.50-0.63, p<0.001) while that for a private school educated, high social status, white, male who had intercalated was 0.24 (95% CI 0.20-0.29, p<0.001).

Discussion:
The combined effects of ethnicity, gender, type of secondary school attended, social status, academic ability, aptitude, medical school and Foundation School attended influence the probability of doctors’ decisions to apply to general practice specialty training. These factors are important considerations for policy makers and medical schools looking to increase the number graduates entering GP specialty training. Further research is required to investigate how and why these factors affect career decisions of junior doctors.

References:
3. Wiener-Ogilvie S., Begg D. & Dixon G. Foundation doctors career choice and factors influencing career choice. Education for Primary Care, 2015, 26(6), 395-403.
Student acceptability and perceptions following experience as Multiple Mini Interviewers
N Cohen, G Whittaker, S Hussein
GKT School of Medical Education, King’s College London

Background:
In 2016/7, we undertook a project to expand and improve our multiple mini interview (MMI) repertoire for selection to medical school. We increased to a seven-station model, mapped to our programme objectives and values based recruitment. This included one station for trained lay representative interviewers, and one for trained student interviewers, both of which were new developments. The script within each of these stations was planned and created by the representative groups according to an agreed blueprint. This development coincided with the start of a new MBBS curriculum. This project focuses on the student interviewer experience, in terms of operational detail (selection, training, and communication around interviewer role) and their feelings and experiences of being involved in student selection.

Methodology:
Student Interviewers were all year 3 or year 4 students, on the accelerated, standard or extended programme, and interviewed candidates on the corresponding programme only. They were selected based on written responses relating to reflections on their previous experience, and on describing patient-centredness and an empathic approach, or similar, as a key behaviour of future students. As well as key to value-based recruitment, this also reflected the student led station. Local training centres approved their release for a day-long interviewer training session, and up to two half day sessions of interviewing. Towards the end of the annual MMI cycle, all student (and lay representative) interviewers were contacted and invited to complete an anonymised questionnaires and subsequent focus group. All feedback received was analysed as anonymous data. The precise areas explored within focus groups were derived from the questionnaire data, and focus groups were scheduled to ensure full saturation of feedback information.

Results:
Results from the survey and focus groups will be presented.

Discussion:
In refining approaches to medical student selection, it is important that we evaluate the experiences of those involved and associated consequences. This includes operational analysis but also less concrete effects which alone may not be significant but can begin to build on the culture and learning environment. Recent focus on values-based recruitment provides a welcome opportunity to review how schools structure their face-to-face interviews. MMIs provide recognised advantages over traditional interviews. At our institution, they have been used across the health schools for several years. As a central tenet, the value we place and express of our students, interviewers and staff must mirror the values we seek in the students we select. Anecdotal evidence suggests that students value being involved in MMIs. In exploring new means to engage with students and improve the learning environment, we have sought to explore and evaluate their feelings around such involvement.

Ref: 435, Wednesday 21st June, 3.20-3.40pm, Seminar Room 8
A change in selection process at a UK medical school: does the Multiple Mini Interview facilitate widening participation in medicine?

R Patterson, DJ Beaney, JM Price.
Brighton and Sussex Medical School

Background:
UK Medical schools use a variety of selection tools to stratify applicants for the study of medicine(1),(2). These most commonly include academic records, aptitude tests, personal statements, references and interviews(3). Used to evaluate both academic and non-academic attributes, these tools should be both reliable and valid(4). They are implemented to identify candidates who will be successful medical students and competent clinicians(1),(2).

Recent research highlights that selection methods are not necessarily robust, tending to be designed ‘traditionally’, rather than through educational ‘evidence’(1): this has led to increasing interest in Multiple Mini-Interviews (MMIs) as a selection tool. MMIs involve candidates rotating through short examination stations, each consisting of a task designed to test a non-cognitive attribute(5). Emerging evidence suggests MMIs are fairer than traditional panel interviews, with greater reliability and validity(1),(4).

In 2017, the Brighton and Sussex Medical School (BSMS) selection process underwent a change, moving to the MMI instead of the traditional interview, which had been used continuously since the school was founded in 2003.

Applicants from lower socioeconomic backgrounds may be disadvantaged in many ways when applying to medical school, inferred by the over-representation of medical students from higher socioeconomic groups(6),(7). Widening Participation (WP) is a term used in the medical education literature to refer to the processes of supporting candidates from non-traditional backgrounds through all stages of application to medical school, and at BSMS, applicants are so identified if they fulfill 2 of 5 contextual data indicators.

UCAS identify two of the indicators as:
1. Home postcode
2. Secondary school

Applicants may also self-declare three other indicators:
3. Parent, guardian or candidate being in receipt of a means tested benefit
4. The candidate receiving a 16-19 yr bursary
5. Eligibility for free school meals at any point from Year 9 to Year 13

There is a lack of research exploring the impact of selection tools upon WP students and no qualitative data exploring the experiences of WP applicants to medicine during the MMI process.

Methodology:
A mixed methods approach, emphasising the qualitative interpretive phenomenological aspects, was employed. Questionnaires, identifying both quantitative and qualitative data, were administered to a sample of applicants following their MMI. Those candidates willing to take part in an unstructured interview following the release of the results of their application to BSMS, were also identified. These students, including those from both the WP and non-WP group, were then interviewed, in person or via video-conferencing, to explore their perceptions of the process. The data were analysed, both quantitatively, and via a general thematic approach for the qualitative data.

Results:
Results from the questionnaire and interviews will be presented.

Discussion:
In 2008, 71% of successful medical school applicants came from socioeconomic classes 1-3(7). A key aim of medical education, identified by the Council of Heads of Medical Schools, is to produce doctors who will be able to meet the medical needs of society(8), and a key consideration in achieving this aim is to train doctors who represent the diversity of the patients they treat. This is particularly relevant as under-represented groups within medical education are generally over-represented in patient populations(8).

In this study, we document the experiences of WP and non-WP students in a ‘new’ MMI in a ‘young’ medical school. We discuss whether WP students have different experiences to their counterparts in this new process – results from which may allow alternative support to be provided for WP students and help to widen diversity both at BSMS and at other medical schools in the future.

References:


Ref: 185, Wednesday 21st June, 3.40-4.00pm, Seminar Room 8
Widening Access: Investigating UK School Teachers’ Understandings of Suitability for Medicine
K Alexander, J Cleland, T Fahey Palma, S Nicholson
University of Aberdeen

Background:
In the UK, despite medical schools’ involvement and investment in WA initiatives, a 2014 report revealed dramatic disparities between the secondary schools attended by UK medical applicants: 80% of UK applicants come from only 20% of UK schools, and half of schools sent no applicants to medicine in recent years (1). Able and suitable applicants from some schools may face a complex range of cultural, material and structural barriers when considering medicine, and may be advised against the subject by their teachers (1–4). However, despite the important role teachers play in shaping student decisions (5), little is known about how their attitudes, experiences and capacities may affect applications to medicine. This study asks: what do teachers in UK WA schools perceive to be their role in encouraging pupils to apply to medicine, and what characteristics do they perceive to indicate a pupil’s ‘potential’ for the profession?

Methodology:
This was a qualitative study situated within an interpretivist paradigm and social constructionist theory, using semi-structured interviews, field notes and focus groups as data collection methods. Data collection was designed to explore participants’ motivations, influences and experiences with regards to advising, or being advised, on the possibility of studying medicine. Questions were informed by the literature and the interview guide was used flexibly to allow participants the opportunity to express diverse opinions. Data were collected from seven 'disadvantaged' schools across three UK locations between September and December 2016. This included semi-structured interviews with 11 teachers who held responsibility for advising pupils on university choices, field notes from meetings with staff (e.g. headteachers) and 10 focus groups with senior pupils. Template analysis (6) was used to analyse the interviews and focus groups.

Results:
Preliminary data analysis suggests that teachers in WA schools may choose (or feel compelled) to take a more ‘hands off’ approach to advising pupils, facilitating an environment in which the self-determination of the pupil is seen crucial to success. However, this may also allow for other structural factors (such as home environment or location) to play a larger role. Teachers identified a large variety of traits considered ‘suitable’ for potential medics and did not appear to follow one fixed idea of an ‘ideal’ applicant. Full data analysis will be carried out from January to April 2017 and reported at the conference.

Discussion:
Although they are an essential link for facilitating medical school WA activities in schools and an important resource in pupils’ career choices, the attitudes, experiences and circumstances of UK school teachers are under-researched in medical education. Preliminary analysis indicates that teachers’ perceptions and attitudes may affect the problematic disparity between schools’ medical application rates. Findings from this study may be used to better inform WA policy, as well as medical schools’ WA activities and contextual admissions procedures.

References:

Ref: 147, Wednesday 21st June, 4.00-4.20pm, Seminar Room 8
A simple way to improve Foundation Year 1 Doctors’ preparedness for conducting ward rounds
J Pearce, M Redman, S Gajebasia, R Dirksen.
Hull York Medical School

Background:
A Quality Improvement Project in Northern Lincolnshire and Goole (NLaG) NHS FT revealed that Foundation Year 1 (FY1) doctors were regularly conducting medical ward rounds alone, but did not feel prepared to do so(1). An aide-mémoire went some way to improving preparedness, but there was a desire among FY1s for formal teaching in this area1. The value of teaching ward round delivery skills through simulation and observed practice has been explored elsewhere(2,3), but unfortunately these methods are time and resource intensive, limiting their widespread use.

Methodology:
A teaching session and A4 handout were designed and delivered to all 19 FY1s in one hospital within NLaG during the mandatory shadowing period in August 2016. The 30-minute, interactive session began by outlining the rationale for the session, before explaining the process of a ward round and summarising the aspects of care to be considered (structured around the previously developed aide-mémoire(1)). This learning was then put into practice as the group reviewed a virtual patient using the aide-mémoire. The session closed with take-home messages and ‘top tips’. A pre- and post- session questionnaire, delivered immediately before and after the session, was used to assess self-perceived preparedness for conducting ward rounds alone, and self-reported awareness of aspects to consider on ward rounds. A Wilcoxon signed-rank test was used to assess whether there was a statistically significant change in these two variables after the session. The pre-session questionnaire also enquired whether attendees had previously received teaching on ward round delivery.

Results:
All attendees completed the survey (100%; n=19). 16% (n=3) reported having had some form of teaching in this area previously. Before the session, 11% (n=2) reported feeling prepared, compared to 42% (n=8) after (31% increase);11% (n=2) reported being aware of aspects of care to consider on the ward round compared to 89% (n=17) after the session (78% increase). A Wilcoxon signed-rank test showed that the session elicited a statistically significant change in both self-reported preparedness of FY1s (Z=-3.729b, p=0.000) and awareness of aspects to consider (Z=-3.598b, p=0.000).

Discussion:
The 100% response rate maximises the internal validity of the findings. Despite being simple and brief, the session still led to a statistically significant increase in both self-perceived preparedness of FY1s and their self-reported awareness of aspects to consider on a ward round. These interventions could be easily reproduced elsewhere and should be considered for wider implementation to help prepare FY1s for conducting ward rounds.

References:

Ref: 413, Thursday 22nd June, 4.00-4.20pm, Seminar Room 5
Are medical students on the right trach?: A qualitative and quantitative study investigating the necessity of undergraduate teaching based on tracheostomy

P Sykes, S Webster, A McDermott, M Brown, R Sheppeard, I Swart-Wilson, A Samuels, CD Rodd & P Davies
Gloucestershire Academy, University of Bristol, Gloucestershire Hospitals NHS Foundation Trust, Great Western Road, Gloucester, GL1 3NN

Background:
Tracheostomy management poses a significant challenge to a growing number of newly qualified doctors. The insertion of a tracheostomy tube is increasingly common (1,2) and evidence suggests 33.8% of patients now leave intensive care prior to its removal (3), with adverse incidences often subsequently reported in the ward setting (2,4). Additionally, a high proportion of NHS Trusts place foundation doctors on-call for ITU and ENT services wherein emergency tracheostomy management may be crucial. Despite this, postgraduate training is variable (3) and tracheostomy-based teaching is not included in the majority of undergraduate curricula. This is despite national recommendations suggesting all healthcare staff involved in tracheostomy care must be competent in recognising and managing common complications (3). This study is the first to ask whether tracheostomy-based teaching should form a part of the undergraduate curriculum and, if so, when such training should begin.

Methodology:
Ethical approval has been granted from the University of Bristol. Approval has also been obtained from the Gloucestershire Hospitals NHS Foundation Trust (GHNHSFT) research and development team. The study will be addressed in two phases.

Phase 1 – Qualitative Research
Semi-structured interviews will be conducted as a scoping exercise to explore the experiences of consultants and foundation doctors working within intensive care and ENT services at GHNHSFT. Thematic analysis will be used to identify common attitudes regarding the teaching of tracheostomy management to undergraduates.

Phase 2 – Quantitative Research
A tracheostomy workshop will be designed, guided by the results of phase 1. It will be delivered to three cohorts: 1) 3rd year students 2) 5th year students & 3) foundation year 2 doctors. Basic concepts, i.e. indications and anatomy, and emergency management will form the teaching’s core. Data will be collected on knowledge gained via a tracheostomy test given before, immediately after and thirty days post-teaching. Confidence will be assessed by use of pre- and post-workshop questionnaires. A simulated scenario will also be undertaken post-training to gauge practical skills acquired. The performance of each cohort will then be compared.

Results:
Full data collection and analysis will be available for presentation at ASME. A pilot study in which the workshop was delivered to ten third-year medical students has shown promising results. All invited students attended voluntarily while pre- and post-workshop test scores rose from 21.4 to 85.6%. Likert scale questionnaires showed universally improved confidence related to emergency management and six of ten students completed all critical steps of their simulated scenario correctly without prompting.

Discussion:
Tracheostomy related emergencies occur quickly and have the potential to escalate rapidly (1). This could leave a foundation doctor exposed should no senior assistance be immediately available. The tracheostomy training in our pilot study has demonstrated not only student interest and enthusiasm, but also progression in confidence, knowledge and practical skills. Full results will be the first to address whether tracheostomy-based teaching should form part of the undergraduate curriculum and at which stage such training should be introduced.

References:
4. 4th National Audit Project (NAP4) – Major Complications of Airway Management in the United Kingdom: Section 2 – Clinical review [Internet] 2011 [Cited 30th Dec 2016] Available at URL: http://www.rcoa.ac.uk/system/files/CSQ-NAP4-Section2.pdf

Ref: 369, Thursday 22nd June, 4.20-4.40pm, Seminar Room 5
Fear is temporary, the bleep is forever. Development of non-technical skills through the use of an in-situ on call bleep simulation.
K Hogan, J Fukuta, R Rooney and J Morgan
Southmead Hospital, North Bristol NHS Trust

Background:
A large focus of current undergraduate medical training is on the retention and application of clinical skills. The other side of being a doctor, which students feel less prepared for, are the non-technical skills brought into sharp focus whilst on call (1). These non-technical skills include communication, appropriate escalation, and the logistics of manoeuvring around a hospital. Staffing levels are lower and junior doctors are expected to cover a higher volume of patients that are unknown to them during out of hours. Therefore an imperative part of being on-call involves dealing with the stresses of the job, an increased workload and the responsibility of carrying the bleep. Although most medical schools offer a period of shadowing this eliminates the ownership over the bleep and all the stresses and other skills required with handling it. To give students exposure to this responsibility we have devised and will implement an in-situ on call bleep simulation. We hope this will improve their confidence and coping strategies before their first day on call.

Methodology:
A total of 40 medical students will take part in a simulation training session run over 10 weeks. To heighten the realism it will be carried out within the hospital involving clinical areas. There will be four students per session who will receive a handover at the start of the session. Subsequently they will be divided up and sent off to do individual tasks. The students will have sole responsibility for their own bleep and their tasks. Whilst the jobs are carried out the students will be bleeped with a variety of tasks ranging from distractions through to appropriate junior doctor tasks, simulating the prioritisation that takes place during a busy on call. To reflect the varied jobs seen on call we have written five stations ranging from intravenous fluid prescriptions through to identification and escalation of an acutely unwell patient. Doctors will play the part of healthcare professionals at each station where they will record the students’ behaviour. Each student will then be given their feedback during a debrief at the end of the session. During the debrief the students will be encouraged to focus on non-technical aspects, evaluate the emotions and stresses associated with being on call and will be given potential coping strategies which could be implemented when they start work.

Results:
We will gain quantitative data around students’ confidence with communication, prioritisation, escalation and logistics of being on call. We will also collect qualitative data surrounding students’ emotional response to being bleeped, as well as reflections on the usefulness of the session. The project will run between January 2017 and March 2017.

Discussion:
Previous teaching sessions similar to this have been on smaller scales and have focussed on clinical management (2). In this project we are looking to evaluate the use of in-situ simulation to enhance the emotional realism of the life of an on call junior doctor as well as the non-technical skills of prioritisation, escalation and communication. We hope to see fear of being on call reduced and confidence is improves as a result of taking part In this innovative teaching session.

References:
2 Yiangou A, Kamalanathan S, Altemimi B, Mercer S. Piloting a fully immersive in-situ simulation teaching course for final year medical students: “carry the bleep”. BMJ Simulation and Technology Enhance Learning supplement. 2: A27
Improving skills and confidence in Tracheostomy care
H Lewith, F Rose, D Howard
Whittington Hospital

Background:
Nearly 6000 surgical tracheostomies and a further 5000-8000 percutaneous tracheostomies were performed in the UK in 2009/10. Between 23.6% - 31.3% of UK tracheostomy patients suffered a complication, such as accidental tube displacement and obstruction. Whilst this 2014 survey revealed that many hospitals offer training to staff caring for tracheostomy patients, this is most often for nursing and physiotherapy teams. Medical doctors, who are often called to these emergency situations, have inadequate teaching and education when managing these patients. And this can subsequently lead to poor care.

The aims of this education course were to improve medical understanding and knowledge and therefore subsequent clinical confidence in managing patients with tracheostomies. This included indications, methods, complications, long term care and emergencies. The overall aim was to improve patient care when looking after patients with tracheostomies.

Effectiveness of this course was to be assessed by delegate survey.

Methodology:
A one-day course on all aspects of tracheostomy care was developed by the Critical Care Team at the Whittington Hospital, London with expert advice from Professor David Howard (former President of the British Laryngological Association) and Smiths Medical.

This was first run in April 2015 and again in September 2016. The course consisted of morning lectures and didactic sessions covering; basic anatomy, indications for tracheostomy, alternatives to tracheostomy, long-term management of tracheostomy, tracheostomy tube changes and an update on management of tracheostomy emergencies (following the National Tracheostomy Safety Project guidance). The afternoon had three practical sessions using manikin tracheas, covering elective surgical tracheostomies, managing tracheostomy emergencies and insertion of emergency front of neck (following current DAS guidelines).

Delegate surveys were conducted to assess confidence in managing both stable tracheostomy patients, and emergencies in this patient group.

Results:
33 delegates attended in 2015 and 20 in 2016. Feedback was collected for individual sessions and overall confidence from all delegates who attended the courses.

Average confidence managing tracheostomy patients before the course was 5.1/10.
Average confidence managing tracheostomy patients after the course was 8.2/10.
Average confidence managing an airway emergency in tracheostomy patients after the course was 8.2/10.

Discussion:
Current UK teaching and knowledge of all aspects of tracheostomy care, including management of emergencies is mixed. This education course shows that a focused one-day course can increase both confidence and knowledge when managing this patient group.

The courses were aimed at several different medical specialties, reflecting the diverse group of healthcare professionals these patients come into contact with. This enables knowledge and skills to be shared rather than focused within one specific area.

Providing both educational lectures and talks along with practical sessions with emergency scenarios ensured appropriate skills were taught and re-enforced with the practical sessions. This format was also popular with the delegates, with written feedback demonstrating it was a stimulating and effective way to learn.

Further courses are planned in 2017 in conjunction with the Intensive Care Society.

References:
"He’s one of those characters that really inspires you" and “If people are like her, I want nothing to do with it": The influence of the medical role model and ‘anti-role model’ on career choice

AR Thomas, J Lefroy, R Kinston, H Thursby, S Gay, S McBain, S Yardley, B McKinley
Keele University School of Medicine

**Background:**
Career intentions of future doctors begin to form in medical school, and influences on these intentions are numerous. Some are cited more often than others; Hastings, Nicholson and McKinley have reported findings that suggest the provision of high quality authentic placements is a major attractor to a speciality1. However, a factor which is increasingly attributed as important by junior doctors, especially in times of uncertainty about the future of their career and the current difficulties the NHS is facing, is the influence of positive and negative medical role models.

Last year, 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 Foundation 2(FY2) doctors from Keele and other medical schools.

What has become clear is that almost every participant cites a role model as having some influence on their career choice, either positively or in a negative way, with Passi and Johnson discussing “the powerful, often subconscious impact of doctor role modeling in medical education2”.

**Methodology:**
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.

We aim to understand the workings of the ‘black box’ of the mechanisms which determine outcomes in particular contexts. In this case, the ‘black box’ we seek to understand is participants’ decision making about their careers, the outcomes are career choices and the contexts the amalgam of internal (for example personal experiences and drivers) and external (such as learning environment and role models) influences.

**Results:**
At the time of writing this abstract data collection and analysis is incomplete and the results are therefore tentative, but more supporting evidence is arriving daily with the last phase of interviews underway.

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. The second set of mechanisms triggered by exposure on placements was the personal testing and understanding of aptitudes for career roles.

Role models and their opinions of their own career were important in both of these contexts. Positive influences include students looking for a ‘fit’ amongst their senior colleagues. This can be a fit in terms of similar personality, or envisaging themselves in the daily ‘working shoes’ of their role model. Often this is a great source of encouragement finding a specialty in which they feel they ‘belong’. The same can be said conversely however, with many citing what we term ‘anti-role models’. Exposure to personalities and job roles with which they cannot identify is often enough to dissuade them from following a particular career path.

**Discussion:**
The F2 participants in this study have 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. Identifying both role models and ‘anti-role models’ appear to be important influences across our participant responses, suggesting that in a medical career just as in life, we are continually looking for the ‘best fit’ for us. The final phase of interviews is underway, including doctors who have selected GP as a career path. This will hopefully both clarify our interim conclusions, and possibly propose additional mechanisms that influence medical career choice.

**References:**

*Ref: 457, Friday 23rd June, 9.00-9.20am, Seminar Room 10*
What I Wish I Knew In Final Year – The launch of a near peer teaching programme in an Irish University Hospital

N O’Mara, N Davey, C Cheung, S Leavey, KS Cross, R Mulcahy, G Pope, G Offiah.
Royal College of Surgeons in Ireland

Background:
A formalised intern led teaching (ILT) programme was launched in University Hospital Waterford (UHW) in August 2015 to supplement the formal teaching received by Final Year Medical students from both Royal College of Surgeons Ireland and University College Cork. This study outlines the perceived value of ILT to medical students and the experience of providing the programme within a large teaching hospital

Methodology:
During the two academic years, weekly ILT bedside tutorials focusing on core clinical examination skills were delivered by junior doctors (interns) to final year medical students. All students were asked to reflect upon their experience of ILT using minute papers and a likert-type scale gathered anonymously. Intern tutors and clinical ward managers were also surveyed to identify challenges and benefits of ILT.

Results:
To date 100 students have participated in ILT over the two academic years. All students attending UHW had the option to attend three bedside tutorials with an attendance rate of 100%. Reflective feedback from students demonstrated that ILT provides high yield learning opportunities relevant to examination preparation. The experiences of ILT tutors and ward managers were equally positive.

Discussion:
ILT is a valuable resource for exam preparation. It is a unique and relatively untapped learning tool that is valued by both students and tutors alike. Medical students value ILT as it provides an effective and novel modality to learn and develop skills within a safe environment. Importantly, we found that ILT was not perceived to adversely impact patient care or ward activities over the course of the academic years. It is anticipated that ILT will become an increasingly useful tool as teaching commitments burgeon in proportion to rising numbers of medical students. Intern tutor feedback is ongoing but colloquial feedback has been largely positive. Future studies will identify the impact of ILT upon students’ academic performance, the development of ILT tutor professional identify.

References:
Mustafa R, Sobowale O, and Gore D. "A near-peer teaching program designed, developed and delivered exclusively by recent medical graduates for final year medical students sitting the final objective structured clinical examination (OSCE).” BMC medical education 11.1 (2011): 11.

Ref: 377, Friday 23rd June, 9.20-9.40am, Seminar Room 10
Improving Year 3 medical student experience of clinical rotations via a mentoring scheme

J Petrie, A Wilson, A Lambert, R Brown
Imperial College NHS Healthcare Trust

Background:
The importance of mentoring is increasingly recognised in medical education. Since the late 1990s, a variety of formal mentoring schemes have been introduced for medical students, providing help and guidance in learning and personal and professional development [1]. We developed a combined mentoring and teaching scheme matching Year 3 medical students at Imperial College with Foundation Year 1 (FY1) doctors at Imperial College NHS Healthcare trust. A pilot of the program ran for three months in 2015 and was evaluated via a medical student focus group. The feedback was incorporated for the second iteration of the scheme in 2016. Foundation Year 1 doctors who had specifically applied for the scheme were each allocated 2-3 Year 3 medical students completing a 10 week rotation in the hospital. They were provided with workshops on teaching in clinical settings and on mentoring, as well as information on the Year 3 curriculum.

Methodology:
The 2016 Year 3-FY1 Mentoring Scheme was evaluated using paper-based surveys of the medical students and a focus group session to which all of the medical students were invited. Of the 37 medical students participating in the scheme, paper feedback was obtained for 34 (92%) of them. Six medical students attended a one-hour recorded focus group, facilitated by a clinician not involved in the scheme.

Results:
Twenty of the 34 Year 3 respondents met with their mentors for at least one mentoring session and teaching session (with a further 7 having either mentoring or teaching sessions but not both). Of those who met for both mentoring and teaching sessions the feedback was very positive. Eighteen out of 20 (90%) reported that it improved or greatly improved their experience of the placement. All 20 (100%) reported it was useful (to some degree) and enjoyable (to some degree).

Common themes from the focus group were that mentors provided a great resource, both for teaching and for guidance. They were able to give more exams-oriented teaching and provide guidance on where to direct their learning and how to find good clinical cases. Criticisms were around difficulties in timetabling teaching with their mentors due to the clinical commitments of the FY 1s and the variability between mentors in capacity to provide mentoring and/or teaching. They suggested the scheme might be improved if the objectives were more clearly stated and by pairing mentors to allow a back-up for providing teaching.

Discussion:
We have developed an FY1 mentoring scheme for Year 3 medical students, that has resulted in a self-reported improvement in their clinical experience on rotation for 90% of students. All of those who received at least one teaching and mentoring session reported that it was useful (to some degree) and enjoyable (to some degree) with 90% saying it improved their experience at the hospital. The key challenge going forward is to try to improve mentor engagement.

References:

Ref: 289, Friday 23rd June, 9.40-10.00am, Seminar Room 10
10 months and counting...Are you ready to safely manage your ward? A pilot study evaluating the Impact of a Simulated Surgical Ward Round for Final year Medical Students.

MJ Young, S Rai, C Sproson, C Chang, T Browning
Mid-Yorkshire Hospitals Trust

**Background:**
Within current undergraduate medical education, little time is devoted to training the doctors of the future how to safely organise and run a ward round. This lack of structured training runs the risk of newly qualified junior doctors feeling overwhelmed, unprepared and unsafe on busy surgical rotations. Post-graduate simulation ward round training has successfully been piloted in a number of settings in recent years (1-3) and is being to filter into undergraduate teaching (4-5). Our aim was to pilot a simulated surgical ward round training session for final year medical students in preparation for surgical Foundation year rotation.

**Methodology:**
25 students took part in an interactive workshop focussing on good ward round practice. This was followed by a half day of simulation training, consisting of common presentations encountered on acute and elective surgical ward rounds. Students were divided into groups of 2-3 for their simulation training in a dedicated medical education simulation ward. Each scenario was facilitated by a Core Surgical Trainee or Surgical Registrar. During each scenario an actor was instructed to interrupt the students with typical distractions faced by doctors on a ward round, such as discharge summary requests and telephone discussions with microbiology and radiology.

Prior to the workshop and simulation training, students graded (from one to six) their current level of knowledge, confidence and experience regarding patient assessment and the surgical ward round using a 10 point questionnaire. This was repeated after the training. Students were also encouraged to provide open feedback.

**Results:**
An increase in knowledge and confidence for all questions asked as part of the self assessment was observed following training. The greatest improvements were seen in students’ level of confidence with respect to leading a ward round at this stage of their training, and in 10 months time (as they start Foundation Year 1). Using a paired student t-test for statistical analysis of the self reported knowledge and confidence levels pre- and post- simulation teaching returned a p-value of

**Discussion:**
The impact of this training is wide ranging. By providing these basic, but vital non-technical skills at an early stage in a doctors’ career will facilitate ward rounds running in a structured and organised manner. This has been demonstrated by other authors following a similar intervention (3, 6). Pre- and post- training feedback from the delegates of our pilot study support this as a valuable training opportunity. Training medical students and junior doctors how to organise and run a safe ward round will not only improve the service provision element of a ward round, but allow for a multitude of training opportunities, such as increased bedside teaching for discussions around rationales for treatments and management plans. Foundation trainees would also have the basic skills to ‘lead’ a ward round, under supervision of a more senior doctor, to further develop both their clinical and non-technical skills as well as undertake clinical assessments as part of their Foundation Programme requirements.

We advocate a period of simulation ward round training prior to starting the Foundation Programme based on the success of this pilot study. The results of this preliminary study have been overwhelmingly positive, and delegates felt it would positively impact their clinical practice. By providing this training in the latter months of medical school, new Foundation Year 1 doctors will be better equipped and prepared in clinical assessment, decision making and leading ward rounds as they will have been taught the basics of safe and structured patient assessment, reassessment and management, as well as a multitude of essential non-technical skills prior to starting their first Foundation Programme post.

**References:**
4) Thomas I. Student views of stressful simulated ward rounds The Clinical Teacher 2015 12(5): 346-352

Ref: 068, Friday 23rd June, 10.00-10.20am, Seminar Room 10
Developing ‘Out of the Box’: Innovative Multimodal Self-Directed Learning Modules in Gynaecology Sub-Specialties as an Educational Resource for Medical Undergraduates

A Stienen-Durand, R Richardson
Chelsea and Westminster Hospital NHS Trust

Background:
As a medical undergraduate the study of obstetrics and gynaecology can be a daunting prospect. No other medical specialty is so broad it covers conception of human life, its development and delivery to gynaecological conditions that can cause disability and death at an old age. Although ‘common’ topics such as intrapartum care are famously well covered and understood it can be difficult to ensure undergraduates have sufficient exposure to subspecialist areas such as fertility and urogynaecology during their brief attachments. Although these subjects are covered in the medical undergraduate teaching schedule how can we ensure this learning is reinforced and retained? This was the impetus behind the ‘Out of the Box’ modules. Medical undergraduates on their obstetrics and gynaecology attachments were surveyed about how they felt this subspecialist knowledge could be most effectively communicated to them and self-directed learning modules were the most popular vehicle. ‘Out of the Box’ are a range of interactive modules available on the Imperial College School of Medicine ‘Blackboard’ virtual learning environment that are available to students at Chelsea and Westminster hospital using their college provided IPADS. These modules cover subspecialist gynaecological topics and include a presentation on the topic (with audio commentary to reinforce auditory learners training), a video of a history taking, a test consisting of Single Best Answers with feedback, a minimum pass mark and certificate if the test is ‘passed’, Team Based Learning exercises to be use in small group teaching and a feedback facility so the module can be developed in order to stay relevant and of high quality. Medical students are expected to undertake these modules during their seven week placements and are recommended to study them when it’s quiet on the ward, between cases in theatre or whilst waiting for the bus.

Methodology:
The educational impact of the ‘Out of the Box’ modules was assessed in the test scores of the medical undergraduates who have undertaken the modules.

Results:
The test scores of the medical undergraduates following the ‘Out of the Box’ modules will be compared to those students who did not have access to this resource but had didactic teaching on these topics during their obstetrics and gynaecology attachment. Since both groups will take the same test these students will act as controls.

Discussion:
This study will assess whether the ‘Out of the Box’ modules improve medical undergraduates learning in subspecialist areas of gynaecology. Research currently suggests that providing interactive, multimodal self directed modules to medical trainees augments their learning (1). Studies also suggest that self directed learning modules should be an educational strategy that is implemented more frequently in medical undergraduate training (2). Although these modules can be time-consuming to design, the educational impact has thus far been undeniable and we are currently in the process of developing further ‘Out of the Box’ modules.

References:
2. Peine, A., Kabino, K., Spreckelsen, C., Self-directed learning can outperform direct instruction in the course of a modern German medical curriculum-results of a mixed methods trial. BMC Medical Education, 2016 3(16):158

Ref: 351, Thursday 22nd June, 5.00-5.20pm, Seminar Room 10
The use of progress testing in medical school: students’ attitudes and stress levels
N Cohen
GKT School of Medical Education, King’s College London

Background:
Progress testing is a form of longitudinal assessment designed to assess the knowledge of undergraduate medical students at regular intervals during their degree. In September 2016, progress tests were introduced to Year 4 medical students at King’s College London Medical School as part of the new MBBS curriculum. As the curriculum is rolled out, progress tests will eventually be the primary written knowledge-based assessment for Stage 2 (years 2 and 3) and Stage 3 (years 4 and 5) of the curriculum, with testing three times a year in a stage-specific format. This replaces a more traditional end of year single best answer (SBA) question approach. Scores and free text comments within the National Student Survey, and internal evaluations have identified assessment at KCL as particularly stressful for our medical students. The new assessment strategy, which includes this move to progress testing was implemented in part to improve students’ understanding of their learning and to reduce stress. Here, we compare the impact of progress tests on undergraduate medical students’ stress levels and willingness to undertake self-directed learning with those assessed through SBAs.

Methodology:
A mixed methods approach consisting of anonymised questionnaires and focus groups was employed. Results from SBA-assessed year 3 students were compared with year 4 students who have moved to the progress-test-based approach. Both year groups were invited to complete the questionnaire which included elements of the Hospital Anxiety and Depression Scale (HADS) and the Self-Directed Learning Readiness Scale (SDLRS); both widely tested and validated tools of measurement. The issues raised during the questionnaire were explored further with a series of focus groups.

Results:
Results from the survey, focus groups and interviews will be presented.

Discussion:
Curricular redesign provides an excellent opportunity to evaluate the purpose and thus inherent structure of assessment. In so doing, students, embedded in one culture of assessment, are introduced to new pedagogical approaches. If assessment truly drives learning, then we must evaluate both the explicit and hidden consequences of these changes. Exam preparation may contribute to the high levels of stress experienced by medical students. Progress Tests have been shown to reduce perceived levels of anxiety and stress in medical students. This study seeks to explore the narrative of that relationship alongside other anticipated improvements, principally improved reflective practice.

References:
Students’ experiences of masters dissertation supervision
J Anderson, J Price
Brighton & Sussex Medical School

Background:
Research supervision is a common cause for complaint in postgraduate students. It has been a long-standing area of concern for both authors in their own academic practice at a ‘young’ medical school in the South of England, which has a thriving and expanding taught postgraduate programme in many clinical specialities. 15 years after our institution was founded, we wanted to re-examine how we might best prepare our supervisors in Postgraduate Clinical MScs for their task, at the same time as exploring and recommending up-to-date and realistic expectations for our students, the majority of whom are clinicians with busy NHS jobs, studying on a part-time basis.

In the current political climate with students now definitely ‘consumers’, league tables omnipresent and the Teaching Excellence Framework in its nascent phase, the importance of high quality supervision has never been greater for students, academic faculty and institutions alike. Our study attempted to explore, in depth, the experiences of our recent students, in order to draw up revised guidance for our own supervisors & faculty and to share our experiences with colleagues in similar institutions in the UK and further afield.

Methodology:
We adopted an interpretive phenomenological approach to a qualitative study. All students completing dissertations in last three years were invited to participate and those interested were then interviewed either face-to-face or by video/audio conference calls. Informed consent was obtained prior to the start of the in-depth interviews, which were all audio-recorded. The recordings were transcribed verbatim and analysed using a general thematic analysis (1st / 2nd order abstraction) and independently assessed by both researchers prior to synthesis of the findings. A ‘Framework’ approach to analysis of the data was used to aid analysis.

Results:
12 Students were interviewed. The emerging themes included:
• Personal vs Mechanistic (Self-directed / Supervisor-led)
• Expertise : Methodology vs Clinical
• Structure
• Enthusiasm/Motivation
• Encouragement/Support/Advocacy
• Availability & responsiveness – including feedback
• Supervisors’ familiarity with dissertation requirements
• Partnerships – learning contracts
• Potential role conflicts - course leader role vs supervisor / links with other students
• Cultural differences (deference vs assertiveness)

Discussion:
We shall present our findings in further detail and discuss the implications for both supervisors and students in the current educational climate in the UK. You are invited to join in a discussion of the findings and the implications and application of these to your own postgraduate supervision practice, both at a personal and institutional level.

References:

Ref: 415, Wednesday 21st June, 3.40-4.00pm, Seminar Room 5
Tablet Computers in Assessing Performance in a High Stakes Exam: Opinion Matters
F Thomson, S Sinha, J Cleland, A Denison, G Currie
University of Aberdeen

Background:
In a traditional objective structured clinical examination (OSCE), examiners typically record handwritten marks on “machine-readable” paper. This is completed according to pre-defined checklists and examiners may have the option to document comments relating to performance. Drawbacks that exist with this approach include missing marks, difficulties in software correctly recognising allocated marks, accuracy of data transfer, security, time taken to process and storage. Tablet computers (such as the iPad) have emerged as an increasingly popular tool for the reliable capture, processing and storage of assessment data (1, 2). However, evidence relating to their acceptability and usefulness in assessment is limited (3,4,5).

Methodology:
Examiners in a final year OSCE comprising of 15 stations across 2 days in 2016 at a single UK medical school, completed a short questionnaire encompassing multiple choice questions and free-text comments to explore examiner background, opinions and attitudes regarding iPad use in recording performance. Responses were analysed using descriptive statistics and a framework approach applied to thematic analysis of qualitative data. Frequency of missing marks from successive years of paper- and tablet-based assessment data were also compared.

Results:
Ninety-two (97% response rate) examiners (66% hospital consultants) completed the questionnaire of whom 85% had previous use of iPads or similar devices; 95% of respondents answered all questions. Ninety-one per cent felt checklist mark allocation was “very” or “quite easy”, while approximately half (52%) of respondents considered recording free-type comments was “very easy” or “easy”. Seventy-eight per cent preferred the iPad overall. Seventy-two per cent of respondents considered that iPad training was at least “satisfactory” or “very satisfactory”. Greater overall efficiency of marking, built-in electronic prompts to avoid missing marks and resource savings were considered the main advantages of iPads, while concerns relating to technological failure, “navigation” issues and limited time to record free type comments were raised. In the comparative (2015) 15-station OSCE, 129 (4.5%) paper marking sheets contained at least one missing mark, there were no missing marks in the 2016 iPad-recorded OSCE.

Discussion:
In the context of a demographic accustomed to regular tablet computer use, examiners strongly preferred recording candidate marks and feedback on iPads compared with paper checklists. The design of the system also eradicated the problem of missing marks. However, legitimate concerns were raised which require consideration in terms of future development of OSCE application software. This study adds to the paucity of literature underpinning the use of electronic devices as acceptable tools in OSCes calling for further studies in different contexts to add to the discourse on this topic.

References:

Ref: 292, Wednesday 21st June, 4.00-4.20pm, Seminar Room 5
Progression and retention: Are there differences between students entering via a Gateway programme and traditional entrants? 
R D'Silva, S Curtis, J Cleland, M Barker, J Rowland 
University of Southampton

Background: 
The widening participation agenda is of considerable contemporary interest, especially in regard to socioeconomic status; improving social mobility is one of the three priorities for higher education highlighted in the 2016 report released by the Department for Business Innovation and Skills (1). This is of particular concern in medicine where figures continue to show it to be one of most socially exclusive professions (2,3) and the Medical Schools Council has set targets for medical schools to increase the proportion of students from a lower socioeconomic background4. 
The BM6 programme at the University of Southampton is one of a small, though growing, number of ‘Gateway’ programmes at UK medical schools that have a specific focus on widening access and recruit nationally (5). The BM6 programme consists of an initial ‘Year 0’ in which 30 students are taught and supported by dedicated staff, after which they enter Year 1 alongside students on the standard medical programme with no further specific input. 
A 2008 study including descriptive analysis of the Extended Medical Degree Programme (EMDP) at King’s College London, in which students receive additional support over the first three years, found a 7% lower retention rate in EMDP students when compared with traditional entry students (6). There is otherwise a paucity of research into the progress of widening access students through medical school and therefore there is limited empirical evidence of the effectiveness of widening access initiatives in diversifying the medical workforce. This study is the first to use multivariate statistical analysis to explore the relationship between socio-demographic variables and performance within a widening participation context. BM6 student progression and retention is compared to progression of BM5 (traditional entry) students, identifying similarities and differences between the two groups at key academic milestones in order to help optimise progression of these students.

Methodology: 
Retrospective cohort study of students entering the University of Southampton medical school between 2006-2011 (n=1051). Admissions data, including sociodemographic indicators, progression and assessment data are analysed using descriptive statistics. Appropriate multivariate statistical analysis is carried out with necessary corrections made to account for multiple comparisons.

Results: 
Initial results show that compared to BM5 students approximately 10% fewer BM6 students who entered Year 1 completed the programme. Results of the multivariate analysis will be presented at the meeting, including identifying specific points at which differences in achievement and progression are more or less pronounced between BM5 and BM6 students. Initial results suggest that a higher proportion of BM6 than BM5 students undertake repeat years. Sixty-one percent of non-progression in BM6 students is due to academic failure, while 23% is a result of student withdrawal. Results will be presented comparing these findings to non-progression data of BM5 students, in addition to more granular data for all students on timing of and reasons for student withdrawal.

Discussion: 
Widening participation should concern more than merely enabling access to medical school, but encompass progression through it and entry into the medical workforce. Similar to the data from King’s College London (6), we found a lower retention rate in students entering medical school through the BM6 programme compared with traditional entry students. For these students, a lower probability of successful completion may then present additional barriers to applying for a medical degree in the first place. Our analysis allows identification of patterns of non-progression unique to widening access medical students, which, in a resource limited environment, should help programme developers and educators improve the timing and content of support measures aimed at increasing student retention and success.

References: 

Ref: 275, Wednesday 21st June, 4.40-5.00pm, Seminar Room 5
Measuring the Immeasurable: The challenges of assessing Mindfulness in undergraduate medical students in the UK
H Bintley, R Sugden
Bart’s and The London, School of Medicine and Dentistry

Background:
Over the past three years academics at GKTSoME (King’s College London GKT School of Medical Education) and BLSMD (Bart’s and the London, School of Medicine and Dentistry) have taught mindfulness to medical students in their institutions. Mindfulness has been shown to reduce recurrent depressive episodes (1), help students cope with the rigours of medical school (2), positively correlate with lower perceived stress scores (3) and increase working memory (4), all skills that are important to maintaining health and well being in medical school. However, challenges remain concerning the best model for teaching and assessing mindfulness as well as how to engage students with this teaching. This piece describes two studies conducted at GKTSoME and BLSMD, which aimed to assess the implications of teaching and evaluating mindfulness in the MBBS curriculum in the UK and how better integration of this concept may be achieved.

Methodology:
Two mindful educational interventions were designed at GKTSoME and BLSMD and levels of mindfulness for each student were measured pre and post intervention using two scales, the first of which is the ‘five facets of mindfulness’ score (5), a validated tool from the ‘Kentucky Inventory of Mindfulness’, which is based on 5 components of an individual’s experience of Mindfulness. The second is the MAAS (Mindful Attention Awareness Score) (6), which has advantages of being quick and easy to use and analyse but has some negatively based questions. There were a number of significant challenges that the authors faced in implementing these interventions and using these scales and this created significant variation in the outcomes between the two studies. The factors that resulted in this variation were identified and this was used to aid further research in this area.

Results:
The results of the scales from the studies at GKTSoME and BLSMD will be presented and a comparison will be made between the outcomes of the two studies to identify reasons for variation in results.

Discussion:
Student perception of mindfulness, institutional factors and timing of sessions all affected students’ engagement with teaching and assessing mindfulness significantly. All students felt that mindfulness per se should be available to them at medical school but were divided as to how it should be delivered. A comparison between the two studies identified a number of strategies that could be employed to improve barriers to engagement and integration of mindfulness into the curriculum. This also highlighted issues concerning student health and wellbeing and the appropriateness of the use of scales to measure Mindfulness.

References:

Ref: 499, Thursday 22nd June, 4.00-4.20pm, Seminar Room 3
Behavioural responses of first year students to a core curriculum, experiential, mindfulness course

J M Hales, M McCartney, P Mukherjee, E Hayward, C Sanders, J McDonald, S McLoughlin
University of Leicester Medical School

Background:
The cultivation of mindfulness (non-judgemental, compassionate, present moment awareness) has been shown to reduce depression, hostility and anxiety in medical students (1,2), to reduce burnout in doctors (3), reduce medical error (4) and enhance doctor-patient communication skills and patient satisfaction with consultations (5). The teaching of mindfulness to medical students is growing in the UK, most courses being elective. Two medical schools in the Midlands have introduced mindfulness teaching as core curriculum. This report presents the reception and early behavioural responses of a large cohort of first year medical students to a core curriculum mindfulness course, which encourages students to experience mindfulness for themselves. It aims to give insight into how first year medical students respond to exposure to a health enhancing practice that has not traditionally been taught.

Methodology:
Dr Craig Hassed has authored the ‘Health Enhancement Program’ (HEP), a course whose primary, overarching focus is mindfulness, and which has been taught to first year medical students at Monash University, Melbourne for 14 years. He gave help and permission for the course to be delivered, for the first time (autumn 2016), to first year students in the UK. As a result, a large cohort (245) of 1st year medical students took a slightly modified HEP (five lectures and six tutorials) as core curriculum in their first semester. Students were taught the scientific evidence base for the health benefits of mindfulness and of other ‘pillars of health’ (exercise, nutrition, social connection, spirituality and environment) and were encouraged, but not obliged, to experiment with each, particularly mindfulness. Three questionnaires were completed by students in their first tutorial and, five weeks later in their last tutorial, in accordance with evaluation procedures at Monash. Questionnaire submission was optional. The questionnaires, which included opportunity for free-text feedback, explored aspects of psychological and physical health, and the adoption of healthy lifestyle behaviours.

Results:
Results of the analysis of the student questionnaires (a high proportion submitted their responses) will be presented to illustrate the pattern with which first year students received the new course and the degree to which the course initially altered their health related behaviours.

Discussion:
The teaching of mindfulness is growing, but is in its infancy in UK medical schools. Its introduction relies, if it is to be successful, on a different approach from that used for much didactic medical teaching, in that it cannot be taught explicitly but can be modelled by educators in order to be cultivated in learners (6). Teaching mindfulness requires tutors to adopt an approach which embodies mindfulness if it is to be understood and adopted by students, many of whom may have had no former teaching in the area. Reports, such as this one, on attempts to do this in the core curriculum, aim to be be useful to fellow medical schools which are considering how to start and sustain such teaching for whole cohorts.

References:

Ref: 478, Thursday 22nd June, 4.20-4.40pm, Seminar Room 3
Migrants and healthcare: educating tomorrow’s doctors for a global (and highly politicised) challenge
A Berlin
Barts and The London School of Medicine and Dentistry, Queen Mary University of London

Background:
The relationship between migrants and healthcare is complex, highly contemporary and politically charged. This paper focuses on the education of doctors for their role in the care of vulnerable migrants in particular refugees and asylums seekers as well as victims of modern-day slavery and trafficking, and undocumented labourers and sex workers. Many have complex physical and psychological needs. Health professional education has not kept pace with these challenges and educators need to navigate recent political, policy and popular responses to migration.

Methodology:
This paper asks the questions:

• How do we tackle core topics that have become politicised?
• Should we go beyond preparation for immediate clinical care, to include advocacy for vulnerable patients?
• Do medical schools have a wide role in social justice regarding migrants?

The paper uses frame analysis to consider the role of medical schools in preparing doctors for their duty to vulnerable migrants and describes the theoretical basis and practical implementation and evaluation of an educational intervention. Frames are used by individual, organisations and social groups to pass on predetermined messages to inspire; to mobilise, but also manipulate and actively divide or deceive. Frames define issues or problems Assign cause and responsibility, Make moral judgements and Suggest remedies. Through frame analysis we can get purchase on the topics at hand: healthcare and migrants and the relationship between the two. Frame analysis also allows us to unpick messages in the press, on social media, in political discourse and in web resources which undergraduate students may have trouble interpreting. (1)

Results:
Analysis revealed two NHS frames: a model of universal health coverage alongside a service in crisis no longer affordable (2). Recent growth in migration is also framed as a crisis. Most importantly is the framing of a causal relationship: the migrant crisis causing health service crisis. With this context in mind we developed a half day flipped teaching intervention involving national NGOs (3) and using case-based learning inviting students to analyse healthcare policy and its implication for vulnerable individuals.

Discussion:
The paper presents the frame analysis more detail, described the educational intervention in its evaluation, as well as describe institutional wide developments. It considers issue of students ability to verify sources and bias in media portrays and how this may influence policy (in particular regarding charging migrants for care (3). I also describe the Refuge in a Moving World project and its link to opening up universities to benefit migrants in the community - for health and education.

References:
Integrated prescribing teaching: Is there a short prescription for a chronic problem?

J Morgan
South Warwickshire NHS Foundation Trust

Background:
Despite carrying the burden of prescribing, newly qualified doctors view this as the most challenging aspect for which they feel least prepared on graduation (1). It is therefore unsurprising that the majority of prescribing errors are made within the first years of professional practice (2). The growing complexity of patients and medications, in conjunction with increasing expectations of prescribers, continues to make this fundamental task a delicate balance of knowledge, judgement and skill (3). Traditionally, opportunistic experience of prescribing resulted in inconsistent acquisition of this vital competence and formal training has thus been recommended (4). Nevertheless, there is no consensus as to the best educational intervention to achieve the required outcomes set out by the GMC (5). Vertical and horizontal curriculum integration is regarded as best practice in medical education and favoured by teachers and students (6) yet prescribing continues to be taught in isolation and with great inter-medical school variation (7). An interactive, clinically integrated prescribing course has been developed at South Warwickshire NHS Foundation Trust to deliver teaching, assess pharmacology and prescribing knowledge, and supplement the current curriculum.

Methodology:
Final-year graduate entry medical students allocated to Warwick Hospital completed the prescribing course comprising ten hours of interactive learning and two hours of assessment. Experiences included; five small group interactive revision tutorials based on the British Pharmacological Society curriculum (3) providing vertical integration of common clinical presentations, practising prescribing in Objective Structured Clinical Examinations (OSCEs) and a pre- and post-course fifty single best answer formative multiple choice question (MCQ) paper. Pre- and post-course questionnaires were collected; evaluating student confidence using Likert scales (1-10) over six taught domains (medication history, using the BNF, transcribing, controlled drug discharges, dose adjustment in renal and liver failure and antibiotic prescribing). Additionally, qualitative feedback was collected regarding specific sessions, course delivery and overall prescribing confidence using free text boxes and Likert scales (1-10). A paired student t-test was used to assess the significance of confidence and MCQ score changes.

Results:
Preliminary results are from 60 students. Statistically significant increases in student confidence were observed in all domains, with the greatest increases in discharging patients with controlled drugs and prescribing antibiotics. Students enjoyed the “variable interactive teaching styles”, the chance to practice and receive immediate feedback on their skills, and regular assessment supporting learning. Likert scales assessing the quality of teaching (9.82/10), overall prescribing confidence (9.73/10) and course recommendation to colleagues (10/10) were highly positive. The students scored, on average, 25% better on the post-course MCQ than on the pre-course paper. A paired student t-test found the results to be statistically significant (t=8.2227, p=0.0001).

Discussion:
The study has shown that final-year medical student knowledge and confidence in prescribing can be improved in a time effective manner. The structured approach with clinical integration and regular assessment and feedback allowed for students to apply and test their skills in a safe environment. Potential limitations include; self-selected student participants, assumptions regarding improved student confidence correlating with improved prescribing competence (8) and lack of evidence of predictive validity. The course has now been adapted to provide revision sessions to all Warwick Medical School students prior to their local and national prescribing assessments, which will allow further gathering of evidence as to its effectiveness in preparing students for both their examinations and commencing Foundation Training.

References:
5. General Medical Council (2015) Outcomes for Graduates (Tomorrows doctors).London: General Medical Council


Ref: 466, Thursday 22nd June, 5.00-5.20pm, Seminar Room 3
Pastoral Care: Promoting Resilience in preparation for practice
H Boyce, P Ehilawa, C Sharratt, F Perfect, L Abbott
Sherwood Forest Hospitals NHS Foundation Trust

Background:
The period of transition between medical student and junior doctor is recognised to be a stressful one (1). According to the General Medical Council (GMC) “One in ten UK medical graduates feels poorly prepared” (2). Final year medical students at the University of Nottingham undergo a six week ‘Medical Assistantship’ programme (MAST) one to five months before commencing work as a foundation doctor.

Methodology:
As part of the MAST programme, we piloted a teaching session on ‘Pastoral Care and Resilience’ at King’s Mill Hospital (KMH) and Nottingham University Hospitals (NUH). The sessions were supported by the Professional Support Unit (PSU) from Health Education England – East Midlands (HEEEM). The aim of the session was to enable students to be better prepared for challenges they may face as junior doctors, identify positive coping strategies and increase awareness of available support structures. The session was based around facilitated small group discussions around six topic areas: emotional intelligence and resilience, transition to practice, challenging situations, mental health and holistic wellbeing (covering financial, social and physical health). The concept of mindfulness, a recognised influence on individual resilience in physicians (3), was also introduced.

Results:
A total of 43 MAST students attended sessions between March and April 2016. Twenty nine of the 43 participants (67%) said they would describe themselves as being a resilient person. However, 48-76% still had concerns about how they would cope with the daily aspects of working as a foundation doctor. This figure is much higher than the GMC estimate (2). The main areas of areas of concern were around prescribing errors, managing patients out of hours and prioritising workload to meet competing patient demands. Students provided anonymous free text comments on their learning points from the session. Several participants commented that it was helpful to know that others also feel out of their depth during this period of transition and “the importance of not struggling alone”. Most were not aware of the support mechanisms available and found it useful to find out about services such as the PSU.

Discussion:
‘Resilience’ is rising on the healthcare agenda, however this pilot session demonstrates the need for more work to be done to prepare medical students for the transition to practice. Following in on from the successful pilot this session will be repeated for the 2017 cohort of MAST students. In order to assess the impact of this session participants will be asked to fill in a questionnaires regarding their own perceptions of their preparedness to practice at the beginning and end of the session. We also hope to use this work to inform the discussions regarding the integration of resilience into the medical school curriculum.

References:
The Impact of Dyslexia on Medical Students: A Mixed Methods Study
S Shaw, J Price, J Anderson
Brighton and Sussex Medical School

Background:
Previously we reported upon a qualitative study of medical students' experiences of dyslexia (SS & JA). There had been no previous study of this. That study generated a host of themes which highlighted problem areas and experiences - along with some surprising strengths in medical students with dyslexia. The authors' concerns were next to identify how general these issues were.

Methodology:
The themes generated in the initial study were adapted into a questionnaire. An electronic survey was advertised in eBulletin announcements within South Thames Foundation School and the General Practice School within Health Education Kent, Surrey and Sussex - asking junior doctors with dyslexia to take part. This questionnaire explored their thoughts, feelings, experiences and prescription practices. It also encouraged free-text elaboration of answers.

Results:
In this paper, we discuss the impacts of their dyslexia on their time at medical school. Participants experienced the following, all as results of their dyslexia: 45.95% experienced shame, 59.46% experienced anxiety, 78.38% felt inadequate, 83.33% have felt stupid, and 32.43% admitted to suffering with depression.
“I was] often mocked during my GP placement when spell checking notes before entering them into patient notes.”

Discussion:
Detailed results will be presented and discussed with respect to the implications for teachers, educational supervisors and assessors of medical students and junior doctors in training. The findings are often surprising and emotive and appear to be highly important in the context of improvements in student support in medical education, both locally and nationally.

References:
Kolb for the modern day: would a mobile phone application aid medical student reflections?
R Sheppeard, Z Dawood, M Brown, I Swart-Wilson, P Sykes, A McDermott, A Samuels, P Davies
Gloucestershire Academy, University of Bristol, Gloucestershire Hospitals NHS Foundation Trust

**Background:**
Reflection has been defined as ‘intellectual and affective activities in which individuals engage and explore their experiences in order to lead to a new understanding and appreciation’ (1). In an increasingly demanding workplace reflective practice is vital for the clinician to be able to learn from everyday experiences. Despite the General Medical Council (GMC) advocating the process of reflection it is widely acknowledged that it is not done well (2,3). Strategies to facilitate reflective practice have been suggested and include framing it as a learning opportunity, providing supervision and using electronic recording (4). With the popularity of mindfulness there are a number of reflection based phone applications (apps) available for the general public however there appears to be no bespoke application for medical students (5). The aim of this project is to develop an app and evaluate its impact on reflective practice. It is hoped that by embedding the process of reflection into students early on in their careers it will become central to their development as healthcare professionals. An app to facilitate this process aims to create a monitored structure for a more personal and meaningful reflection experience.

**Methodology:**
This project has three phases; scoping, app design and evaluation. Ethical approval for evaluation has been granted from the University of Bristol. In phase one current reflection based phone applications available from both the Google play and Apple stores, including the GMC’s ‘My CPD’, app have been critically analysed. During the design process the main focus will be to produce an app which allows students to fit reflection more easily into their busy schedules. The students will be able to download the app free of charge and print off evidence for their portfolios. The information recorded will remain fully anonymous. The creation of the app will be undertaken in partnership with the University of Gloucestershire.

The finished app will be introduced to second year students starting their first hospital placement. For those recruited half will use the app and the other half will be asked to reflect in the ‘standard way’ via written reflections. Pre and post placement questionnaires with Likert scale and free text questions will be used to compare the two methods and collect feedback regarding the app. The data collected will also be analysed to compare the number and quality of reflections completed by those with and without the app.

**Results:**
The phone application and full results of the study will be available for presentation at ASME. Phase one has revealed common themes amongst established phone apps but no app dedicated to medical students.

**Discussion:**
Reflection is becomingly increasingly important for medical students who will be entering a health service which is under ever increasing pressure. It is critical to foster the good practice of reflection within students so they can develop coping strategies and build on their knowledge. Reflections not only help professionals learn from mistakes creating an open work culture but should also be used to recognise when something has gone well, cultivating positivity for students. Using technology seems be an effective method for promoting reflection at an early stage of career development.

**References:**

Ref: 383, Wednesday 21st June, 3.40-4.00pm, Seminar Room 3
All work and no play: would establishing a collegiate culture for the University of Bristol academies improve student wellbeing?
R Sheppeard, I Swart-Wilson, M Brown, A McDermott, P Sykes, A Samuels, C Rodd, P Davies
Gloucestershire Academy, University of Bristol, Gloucestershire Hospitals NHS Foundation Trust

Background:
Medical school can be highly stressful environment especially during the clinical years. The detrimental effects of studying medicine on student wellbeing are well documented (1,2). Research by the General Medical Council (GMC) lead to publication of ‘Factors that impact on medical student wellbeing’ which included a questionnaire to review areas of risk and therefore tailor support to student populations (3). It highlighted multiple domains within medical schools that can be addressed to make a difference to student wellbeing. Current GMC guidance also states that medical schools should promote a good work-life balance (4). The University of Bristol has recognised this and has appointed a self-care and resilience champion, whilst attempting to integrate wellbeing values into the curriculum. University of Bristol students are placed in academies across a wide geographic area during their clinical years. Currently there are no regular activities in place for students whose resilience is tested during this time of transition both into academies and to clinical study. This project aims to establish a community for students through a diverse programme of accessible activities and assess the impact of this on student wellbeing.

Methodology:
Ethical approval was granted from the University of Bristol. Third year students were recruited and completed two preliminary questionnaires; the validated GMC survey and an assessment of their current activity preferences. Thereafter they were given the opportunity to engage with activities over the subsequent weeks. The validated questionnaire will be repeated at the end of the placement. The social activities, as diverse as a baking competition and netball matches, aim to encourage the students to meet new colleagues, creating a platform for peer support as well as integration into the hospital community. The questionnaires will be analysed to measure any changes in the students perceived risk of studying medicine and the free-text questions scrutinised using content analysis.

Results:
Full results will be available for presentation at ASME. Data collection is ongoing however preliminary analysis of the pre intervention questionnaires reveal that many students have had difficulty continuing extra-curricular activities on commencing their medical degree. They commented that their current placement was ‘not very sociable’ and that they didn’t feel valued by the medical school.

Discussion:
It is evident that medical students often struggle to balance their studies and extra-curricular activities and thus maintain a state of physical and mental wellbeing. Research has shown this issue can be tackled by targeting both practices and attitudes (5). This project aims to address these by making an achievable and reproducible step towards changing the medical school culture, especially that of work-life balance. The early introduction of this concept will be valuable as their career progresses.

References:
(5) Zwack J and Schweitzer J. If every fifth physician is affected by burnout, what about the other four? Resilience strategies of experienced physicians. Academic Medicine;88(3):2013

Ref: 372, Wednesday 21st June, 4.00-4.20pm, Seminar Room 3
Human factors training for medical students: Exploring student perception and how to promote a better understanding.
C Allen, J Bhogal, S Singh
Undergraduate Department, Clinical Learning and Development, Chelsea and Westminster Hospital, Imperial College School of Medicine, London, United Kingdom

Background:
Human factors training aims to assess the interaction between humans and the system in which they work. It is increasingly used in medicine to enhance patient safety and to reduce the risk of medical error (1). It has been shown that it changes the practice of those who undertake training and has a direct benefit to patients (2). The role of human factors training in undergraduate medical education is still developing. Currently there has been no formal training at our institution for human factors. This study aims to identify the attitudes of medical students towards human factors training and how a training programme can affect the student’s preparedness and approach to clinical situations required for their career as doctors, with an aim to setting up a regular teaching programme.

Methodology:
We sent out a questionnaire assessing student’s understanding of, attitudes towards human factors and the perceived relevance to their careers. We sampled 2 groups from Imperial College School of Medicine; Year 3 on their first clinical attachment, and Year 6, in their final placements pre qualification. Following this, we carried out a series of human factors training sessions. The first session involved a focus group focussing on the student’s perceptions about how human factors can be used in their own practice. The sessions themselves included small group tutorials and workshops aimed at highlighting areas of human factors training and how this can be applied to the student’s own practice. On completion of the sessions, a similar post intervention questionnaire is completed and focus group to gauge students’ change in attitudes and perceptions. We will also assess the contrast between the two year groups and determine factors regarding perceived value, relevance to related to level of training, and most effective time to expose students to human factors training may be.

Results:
Results from both the initial questionnaire and focus groups and the questionnaire and focus groups after the training sessions will be presented. The initial questionnaire has shown that student’s perception of human factors training is limited, particularly in terms of how it is relevant to their own practice.

Discussion:
Human factors is an umbrella term that covers a large number of concepts. Deciding on an appropriate method to teach this to learners has been identified as difficult (3, 4). Using an approach with a variety of teaching methods and allowing students from different year groups to attend will enable a better understanding the importance human factors plays in the careers of the medical students. Ensuring they have an appreciation for this and how they can apply this knowledge to their practice is key to the success of this training programme and ultimately in reducing risk to patients.

References:

Ref: 367, Wednesday 21st June, 4.40-5.00pm, Seminar Room 3
‘IDERMIFY’: Does using practical illustration and verbal description in a game format improve recognition and confidence in describing common skin lesions?

R Sheppeard, T Millard, M Brown, I Swart-Wilson, P Sykes, A McDermott, A Samuels, C Rodd, P Davies
Gloucestershire Academy, University of Bristol, Gloucestershire Hospitals NHS Foundation Trust

Background:
Despite skin disease being commonplace in all areas of medicine, dermatology is underrepresented in the undergraduate curriculum (1). The University of Bristol dedicates just fifteen hours to its teaching over the five year course. Anecdotally it can be difficult for students to have the opportunity to describe skin lesions using the correct terminology during these learning events. Dermatology has a long history of using visual simulation to facilitate teaching (2). An American study demonstrated the benefit of using fine art to enhance observational and diagnostic skills (3) and this has since been trialled in dermatology trainees in the UK with good results (4). Idermify, a novel educational game, has been created to address both the limited time available for teaching and the importance of employing the visual and descriptive nature of dermatology. Educational games are known to be successful in engaging and motivating learners (5). Allowing students to practise describing and accurately drawing skin lesions, a transferable skill set, can prepare them for their work as junior doctors.

Methodology:
This is an action research project for which ethical approval was granted from the University of Bristol. Fourth year students were recruited at the end of a pre-scheduled dermatology tutorial. Data was collected through pre and post session assessment of knowledge and self reported student confidence. The game involves students either verbally describing or drawing on pre made body maps, a series of skin lesions to their team mates. Results were analysed to measure changes in knowledge and confidence. Pre and post session knowledge quiz scores will allow comparison to the standard teaching. The students’ feedback will also be used to further develop the game.

Results:
Preliminary results show that the students felt more confident both describing and drawing skin lesions following playing the game. The game and full results of the research will be available for presentation at ASME.

Discussion:
With skin disease being the most common reason to consult primary care it is essential that medical schools develop students competent in diagnosing potentially serious conditions (6). Results suggest that a novel card game encompassing description, drawing and observation skills demonstrates the ability to improve student’s recognition and confidence in describing common skin lesions. Games and group learning can be incorporated to address the limited time available to teach dermatology.

References:
(3) Dolev JC, Friedlaender LK, Braverman IM. Use of fine art to enhance visual diagnostic skills. Jama. 2001 Sep 5;286(9):1020-1.

Ref: 362, Wednesday 21st June, 4.20-4.40pm, Seminar Room 3
A Qualitative Study Assessing the Impact of ‘Patient Teacher’ Sessions on Medical Students Obstetrics and Gynaecology Training
A Stienen-Durand, R Richardson
Chelsea and Westminster Hospital NHS Trust

Background:
It has long been recognised that patients can make a unique and invaluable contribution to medical undergraduate and postgraduate training (1). However, these exceptional educational resources are often underutilised. Whereas patients with stigmata of disease are often employed for clinical skills training and examinations ‘patient teachers’ are rarely recruited to provide teaching to students about their experience of their chronic conditions or illnesses (2). In this study we set out to assess the educational impact of ‘patient teacher’ sessions on medical undergraduates learning during their obstetrics and gynaecology attachment.

The exemplary ‘patient teacher’ is knowledgeable about their chronic condition, articulate, open and honest. Sessions with the most education impact are those where patients give an insight into their patient journey from diagnosis to management and their experience of the holistic care they received from the multidisciplinary team (3).

Methodology:
In this qualitative study medical students undertaking their obstetrics and gynaecology attachments received tutorials prior to their ‘patient teacher’ session on two specific chronic conditions. Following this teaching they were asked to complete questionnaires on these conditions. Several weeks later two patients with these chronic conditions attended the department and provided ‘patient teacher’ sessions. In these sessions patients spoke for 20 minutes on their condition and then invited questions from the undergraduate audience. Medical students were subsequently asked to complete a second questionnaire on the ‘patient teachers’ chronic condition and their holistic care. The undergraduates were also invited to focus groups to discuss their experience of the ‘patient teacher’ sessions.

Results:
Qualitative data from questionnaires before and after the ‘patient teacher’ sessions and from two focus groups following the ‘patient teacher’ sessions will be presented.

Discussion:
This study will assess the educational impact of introducing regular ‘patient teacher’ sessions into medical undergraduate training in obstetrics and gynaecology. Current research suggests that patients can be a valuable resource in the training and shaping of our doctors of the future. Undergraduate students report an improvement in their understanding of the chronic illness, the patient journey and holistic patient care (4). However, the educational merits of these sessions need to balanced against the time and cost pressures of recruiting and retaining ‘patient teachers’ and the potential implications on patient’s physical and emotional health.

References:

Ref: 348, Wednesday 21st June, 5.00-5.20pm, Seminar Room 4
'The Million Pound Drop Attack': Can a popular television game show format be used to teach comprehensive geriatric assessment?
M Brown, R Sheppeard, P Sykes, I Swart-Wilson, A McDermott, A Samuels, CD Rodd, P Davies
Clinical Teaching Fellow, University of Bristol, Gloucester Academy, Gloucestershire Royal Hospital, Great Western Road, Gloucester GL1 3NN

Background:
Comprehensive geriatric assessment (CGA) has been developed to evaluate elderly people from a medical, psychosocial, functional, and environmental perspective. Patients who receive a CGA are significantly less likely to die or experience deterioration in function (1). The British Geriatric Society’s undergraduate curriculum recommends that students are able to define and describe the process of CGA (2). A recent survey into undergraduate teaching, however, identified that further work was required to increase the amount of teaching devoted to the core domains of health integral to geriatric assessment (3).
Games have been used successfully in medical education to provide an interactive learning environment and allow students to explore difficult subjects in an engaging manner (4). In order to address the complexity and multifaceted nature of CGA, a novel educational game based on a popular television game show format has been developed. This study aims to explore whether there is an effect on engagement and knowledge, and an influence on clinical practice as a result of taking part in the educational game.

Methodology:
A mixed methods, crossover study will be conducted, for which ethical approval has been granted by University of Bristol. Medical students will be divided into two groups and answer case based questions centered on the domains of health used in CGA. Group A will play the educational game, and group B will be taught in a lecture based format. The groups will then crossover to receive the alternative teaching method with modified content related to a different case. Data will be collected through pre and post session knowledge tests and evaluation forms.

Results:
Qualitative data has been recorded from a pilot study of final year medical students. The educational game was described as “fun”, “very interactive”, and “extremely informative”. Students also commented on the value of reward in maintaining engagement with session content. Full results of the pre and post knowledge tests and evaluation will available for presentation.

Discussion:
Comprehensive geriatric assessment requires greater focus throughout the medical curriculum in view of the increasing demand placed on the healthcare system by an aging population. The ‘Million Pound Drop Attack’ offers an innovative and interactive means of exploring the CGA framework and providing an opportunity to influence the future practice of current students.

References:

Ref: 318, Friday 23rd June, 9.00-9.20am, Seminar Room 3
Student performance in team-based learning (TBL) tests predict summative examination performance in first year undergraduate medical students
M Sawdon, Peponis C, Le Saint-Grant A, Doonan K, McLaughlin D
Durham University

Background:
Team-based learning (TBL) is a distinctive form of collaborative, small group learning that has been shown to improve students’ engagement with course material, increase their capacity for problem-solving and develop their team working skills (1-4). These attributes are important in medicine and other healthcare professions, and TBL is already in use in such programmes overseas (5) and in the UK (6). First year undergraduate medical students took part in a pilot of TBL, with the aim of assessing whether TBL might have benefits as an adjunct to existing teaching methods, and to explore whether students’ individual and team performances in TBL activities correlate with their performance in summative written knowledge examinations.

Methodology:
The TBL activities consisted of 3 distinct stages: 1) Guided independent learning, where students were provided with a ‘reading pack’ to enable them to achieve specific learning objectives, outside of class, 2) Readiness assurance tests (RATs), completed in the classroom, consisting of a 10 question multiple choice test initially sat individually (iRAT) then in teams (tRAT); each team consisted of 6 or 7 students, and 3) Application exercises, undertaken in teams, allowing students to apply their knowledge in real-world clinical scenarios. Three TBL sessions were held during the academic year, with 87 of 98 students attending all three activities and 11 students attending at least two activities. Following each TBL activity, students were asked to provide anonymous peer evaluation on all other members of their team, where they had to allocate a range of scores from 0.6 to 1.0, according to the peer’s contribution to the work of the team. This permitted calculation of a team score for each student (the tRAT score multiplied by their average peer evaluation score) and an ‘overall mark’ for each student (a weighted average consisting of the student’s iRAT score and team score in a 1:2 ratio). The relationships between students’ summative written Knowledge examination marks at several points in the academic year and (a) iRAT scores, (b) team scores and (c) ‘overall marks’ were explored using correlation analysis.

Results:
iRAT scores ranged between 10 and 100% (average of three TBL sessions 30 - 80%). Team scores ranged between 54.3 and 95% (average of three TBL sessions 53.1 - 90.3%). ‘Overall marks’ ranged between 44.7 and 96.7% (average of three TBL sessions 52.0 - 84.2%). Students’ written Knowledge exam scores at several points in the year correlated with their iRAT scores, team scores and ‘overall marks’ in TBL activities that had been completed before the exams. For example, the students’ end of year written Knowledge exam marks significantly correlated with average iRAT scores (Spearman’s rho = 0.460, P

Discussion:
Formative assessment of individual and team performance in TBL readiness assurance tests significantly correlate, with medium to large effect sizes, with summative written knowledge examinations, in first year undergraduate medical students. These results may support reports in the literature that TBL improves students’ engagement with course material and increases their capacity for problem-solving (1-4).

References:

Ref: 317, Friday 23rd June, 9.20-9.40am, Seminar Room 3
SimSurgeries: Exploring diagnostic reasoning in primary care
A Nagy, W Scott-Smith, G Ferns
Brighton and Sussex Medical School

Background:
Primary care can present difficulties in diagnostic reasoning through the early presentation of clinical conditions with poorly differentiated features in the consultation (Goyder et al., 2015). Therefore, 4th year medical students at BSMS are exposed to simulated surgeries in primary care through the use of simulated surgeries. Simulated surgeries involve multiple stations, each with an actor portraying a standardized patient role. These surgeries provide opportunities for practicing diagnostic skills in a risk-free environment. Simulated practice has been linked to improvement in procedural skills, confidence, teamwork, and communication (Okuda et al., 2009). However, very few studies have explored the link between simulation and diagnostic reasoning.

Methodology:
Twelve 4th year medical students (7 females; 5 males) volunteered for the present study, and 21 simulated primary care consultations were filmed. The simulated scenarios lasted for 10 minutes each, which involved 7 minutes of consultation time and 3 minutes of feedback. After the simulation, participants watched their filmed consultations and through semi-structured interviews with the researcher they reflected upon their diagnostic reasoning. Thematic analysis was used to identify common themes.

Results:
Students viewed the simulated GP surgeries as valuable opportunities for practice and vicarious learning. They were aware of the gaps in their knowledge, especially relating to management, and this deficit was seen to restrict their diagnostic reasoning. The students perceived that format of the simulation to closely resemble OSCEs and therefore viewed the simulation primarily as exam preparation and not as opportunities for flexible thinking. The perceived pressure to ‘tick boxes’ and the time pressure of the simulation led to reductionist approach in history taking. Finally, students were competent at rapport building and empathizing, but at times found it challenging to articulate their thoughts for the patients and to allow for moments of silence during the consultations to gather their thoughts.

Discussion:
When designing primary care simulations to facilitate diagnostic reasoning, it is important to identify key factors that influence the learning experience. The present study investigated the simulation from the learner’s perspective. Our findings suggest that reducing resemblance to examinations, omitting strict time limits, and reconsidering the use of evaluation checklists by authority figures during the simulation may lead to more flexible diagnostic reasoning. Finally, it is important to monitor and facilitate the students understanding of the purpose of questions asked during routine history taking at this stage of their training.

References:
Spiritual care: a qualitative investigation of faculty perceptions, practice and teaching strategies.
E Hayward, S Cocksedge
University of Leicester

Background:
Spiritual care “recognises and responds to the needs of the human spirit” (1). Spiritual needs include desire for meaning, purpose and hope; giving and receiving love; connectedness to other people and/or a higher power; forgiveness; and transcendence (the ability to find meaning in life’s events) (2). Although spirituality eludes precise definition, disregarding it highlights the narrowness of the scientific view that everything must have a definition in order to be valid and useful (3). The World Health Organisation includes spiritual health in its definition of health (4) and the General Medical Council provides guidance for doctors on providing spiritual care (5). However, undergraduate training in spiritual care is not universal, with many medical schools reporting that faculty lack the skills to deliver it (6). Apart from survey data (7), little is known about how doctors in the UK perceive spiritual care and how they teach it. The aim of this qualitative study was deepen understanding of clinical teachers’ perceptions of spiritual care and how it is taught to medical students in the UK.

Methodology:
A literature search about spiritual care, and how it is taught, informed the development of questions for semi-structured interviews and focus groups. 25 clinical teachers from two UK medical schools participated. Participants represented a variety of specialities and included junior doctors as well as consultants and General Practitioners. They were asked to reflect on their perception of spiritual care, their clinical practice and strategies they would use to teach this subject. The qualitative data was coded and formed the basis for thematic analysis.

Results:
Clinical teachers’ perceptions of spirituality and spiritual care will be presented. How participants provide spiritual care will be described, highlighting facilitators and barriers. Perceived barriers include lack of shared understanding of terminology, clinician uncertainty and a medical environment which does not generally accept spiritual care as a legitimate part of a doctor’s role. Suggested content and methods for teaching spiritual care will also be discussed. Assessment of competence in spiritual care was seen as challenging and remains a topic for debate.

Discussion:
Provision of spiritual care in the UK is patchy, despite recommendations from national and international bodies (4, 5). This study provided insight into the reasons for this. Spiritual care has documented benefits for patients (8) and may also benefit practitioners who provide it (9, 10). In order to facilitate spiritual care in the UK, this study suggested that training should address the barriers of language and culture that currently exist. Further research is needed in this area because although clinical teachers in the study supported inclusion of spiritual care in undergraduate curricula, they disagreed about how spiritual care should be taught and assessed.

References:

Ref: 307, Friday 23rd June, 10.00-10.20am, Seminar Room 3
Learner choice in the design and evaluation of a teaching skills course for medical students
L Ghani, L Ghani, M Said-Noor, N Smati, N Salooja
Imperial College London

Background:
Student feedback is a key component of quality assurance and improvement of teaching and this may be influenced by a variety of factors. One possible factor which could impact on satisfaction with a teaching event is the personal learning preference of a participant (1).
We have established a compulsory one-day teaching skills course for year 3 medical students, involving a combination of didactic theoretical teaching and peer group task work. Evaluation data from 2015 indicated students preferred different programme formats. Therefore in 2016 we gave students the choice of either a) immersive experience followed by the theory and debrief or b) structured briefing and theory to precede the activity. We then analysed evaluation data of each group’s experience.

Methodology:
A pre-course survey collated student preferences for the programme format. Of 198 respondents, 130 (65.7%) opted for structured briefing and theory session preceding the activity. 12 (6.1%) chose an immersive experience followed by the theory and debrief. 56 (28.3%) stated no preference. 163 students were allocated to Stream A (activity first) and 178 Stream B (theory first) according to their stated preference. Stream A also included those who had no preference or non-responders to the pre-course survey.
Evaluation included feedback from a qualitative post-it activity where students were asked to write down the most useful and challenging aspect of the teaching session. These were collected separately and analysed using a categorical approach by two medical students. Themes were then discussed to consensus with two teaching fellows.

Results:
The most frequent themes from both streams regarding the valuable aspects of the course were: opportunity for peer teaching, giving/receiving feedback with peers and developing a learner-centred teaching approach. Additional comments highlighted that both streams experienced similar teaching challenges. These included: difficulty adapting to different learners, giving constructive feedback to peers and practising with peers already competent in the skill.
Two noticeable differences were found between the streams. Firstly, the challenges found from the course. Stream A (activity first) were more likely to self-identify their own weaknesses in the practical activity and found this useful (n=11 vs n=1). Stream B (theory first) were more likely to identify extrinsic factors such as the course structure as challenging for their own teaching performance (n=22). Secondly, stream B submitted more free-text responses (n=130, mean words = 14) than stream A (n=68, mean words=8).

Discussion:
Our findings support the literature on the use of peer teaching as an effective tool (2). Regardless of learner choice and programme format, both streams took similar values from the course, suggesting good constructive alignment. We observed small but noticeable differences between the two streams. Stream A (activity first) were primarily more self-reflective in their thinking and stream B (theory first) more objective. This may reflect learners being at different stages in Kolbs’ learning cycle at the point of questioning (3, 4). Stream B provided more written data and this evaluation format may not have been suited to the learning preferences of stream A. It could be hypothesised that those choosing stream A would identify more with an activist/pragmatist learning style, while those choosing stream B are more likely to be reflectors/theorists (5). Validating this may have provided this evidence. However, limited studies in the literature have found that learning styles are not objectively correlated with student satisfaction or performance (6-8)
Our observations are interesting, as although we tried to tailor the teaching programme to learner preference, we did not consider adapting the method of collecting evaluation data or assessment. Further study is required to evaluate whether learner choice has an objective impact on learner outcomes.

References:

Ref: 287, Wednesday 21st June, 5.00-5.20pm, Seminar Room 3
Cognitive bias in medical student decision making
T O'Hagan, J Fennell, J Sansom
Bristol Royal Infirmary

Background:
Humans are subject to cognitive bias in decision making processes (1). Research in the 1970s demonstrated that decision making processes can be modelled in two distinct ways, which have been labelled as systems 1 and 2 by Nobel laureate Daniel Kahneman (2). In general, system 1 operates automatically, quickly and without effort or sense of voluntary control, but nevertheless usually produces good answers for many choices we make. On the other hand, system 2 allocates attention when mental activities need effort such as reasoning. However, we tend preferentially to use system 1 and have been called “cognitive misers”, saving time and energy wherever possible (3-5).

Consider the following example (6):
A bat and a ball cost £1.10. The bat costs £1 more than the ball. How much does the ball cost?
When using system 1 processing, the answer we get to this question is 10p. However, this is incorrect. When we think again, we arrive at the correct answer of 5p.

Much work has been done in this field to optimise how economists, insurers and bankers make decisions; however this is an area in its infancy within medicine (7).
Nevertheless our medical decision making process is also prone to multiple errors including over attachment to a diagnosis and “search satisficing” where identification of an abnormality or apparent answer shuts down thinking. Another well-known bias is framing, which enables pharmaceutical companies to frame data in preferable ways (8, 9).

We wanted to establish if medical students demonstrated bias in their decision making, and whether this changed during their undergraduate course.

Methodology:
We used four validated questions to assess year 1, 2, 3 and 5 students attending Bristol medical school lectures or Bristol Royal Infirmary. The two particular areas of bias we looked at were anchoring and framing.
We initially asked the students four questions. Two of these looked at framing, where the options were presented in a survival frame i.e. number of people living through a procedure or a disease. The other two questions looked at anchoring, where students were to guess a population size based on whether it was greater or less than an arbitrary number (the anchor).
Two or three weeks later the students were re-questioned with the same two framing questions, but this time presented as mortality data.

Results:
Preliminary results indicate participants provided answers to a question framed in two different ways, one positively, in terms of survival and the other negatively, in terms of mortality. The inconsequential difference in wording produced a significant effect with 68.3% preferring surgery in the survival frame (p ≤0.001) switching to 58.1% preferring radiotherapy in the mortality frame (p ≤ 0.05).

Full results will be presented in due course.

Discussion:
This study is, to our best knowledge, the first study looking at cognitive bias specifically in medical students. The framing questions are identical in overall content, but one framed in a survival frame, and one framed in a mortality frame. Without cognitive bias, we would expect the same number of students to choose the same option no matter how the question is framed. However, medical students changed their preference depending on the frame. Our other early results also indicate that students are risk averse when data is put in the survival frame, but risk seeking when data is put in the mortality frame. Interestingly we also see a slight increase in bias in the year 5 students. This supports existing data from other population sets (10-13).

Our data suggests that our medical school graduates will start work as junior doctors unaware of their cognitive biases which could result in poor decision making that affects patient care (14). To continue this work, we plan to look at critical events in secondary care to identify common biases. Our final aim is to create an intervention to minimise physician bias.

References:


Ref: 283, Wednesday 21st June, 3.00-3.20pm, Seminar Room 4
'Another Hour on Call’ – Improving simulated on call teaching for final year medical students
A Wilson
Imperial College Healthcare NHS Trust

**Background:**
Working out-of-hours or being ‘on call’ is a common source of anxiety for new Foundation Year doctors. Along with a perceived lack of experience in non-technical skills (answering bleeps, task prioritisation, MDT communication) that constitute a large part of a Foundation Year doctor’s role, final year medical students can feel unprepared for life as an ‘on call’ doctor1. ‘Another Hour on Call’ was developed through lessons learnt by the author in delivering ‘An Hour on Call’2. It has aimed to build on previous simulated on call programmes and integrate high-fidelity simulation (in the use of SimMan®), clinical skills, and genuine multi-disciplinary team members alongside a variety of clinical tasks.

**Methodology:**
All final year medical students undertaking a Medicine rotation at St Mary’s Hospital from September to December 2016 were invited to take part in the programme. Participants were briefed and instructed on the use of a bleep, before receiving a handover of clinical tasks. They were asked to prioritise and act on further bleeps including the assessment of an acutely unwell patient, perform simple clinical procedures and prescribe medications. Participants were then asked to handover any remaining tasks, before being debriefed by the facilitator.

Data was collected in the form of pre and post course questionnaires including a 5-point Likert scale relating to participants’ perceived preparedness for various aspects of the role of a FY doctor. There were additionally several free text response questions detailing their concerns about becoming a FY doctor and reflections on their participation in the simulation programme. These free text responses were subject to thematic analysis.

**Results:**
All 27 participants completed the pre course questionnaire; 22 completed the post course questionnaire. Before participation, over 95% of students did not feel confident about starting FY1, with 81% reporting they did know what was expected of them as a FY1 on call covering the ward. Free text responses identified ‘being unsupported’ and ‘responsibility/decision making’ as key areas of concern.

91% of students enjoyed the session; 73% agreed or strongly agreed that they felt more confident about starting FY1. In all domains of the FY1 role evaluated, students reported increased preparedness and confidence, with significant improvements in prescribing (64% felt at least somewhat prepared afterwards, compared to 15% before), task prioritisation (68% from 41% before) and the assessment and management of acutely unwell patients (91% from 41% before). Thematic analysis identified interprofessional communication and task prioritisation as valuable to students whilst prescribing and handover as areas in need of improvement. The multiplicity of clinical scenarios and locations as well as ‘real-time’ actions and responses was noted as increasing the overall accuracy of the simulation.

**Discussion:**
Final year medical students feel unprepared for becoming Foundation Year doctors. An integrated multi-scenario simulation in a time pressured ‘on call’ can improve preparedness in multiple domains. Greater fidelity with SimMan®, insitu simulation and accurate healthcare staff interactions is valued by students.

**References:**

Ref: 262, Wednesday 21st June, 3.20-3.40pm, Seminar Room 4
Healthcare professional students: characteristics and other factors related to career and university choice, and concerns at course commencement.
M Pallan, C Thomas, J Parry
University of Birmingham

Background:
Whilst much research has been undertaken to explore the factors influencing medical students' and other healthcare professionals' career choices following graduation (1,2,3), little is understood about factors that influence both choice of career and choice university in those applying to an undergraduate healthcare professional courses in the UK. Similarly, we know very little about the concerns that healthcare professional students have when they commence their chosen undergraduate course. This analysis aims to gain an understanding of why students choose to study a particular profession, what has influenced them in their choice of university, and the specific concerns they bring with them when they start their course. This will enable programmes to have a more tailored approach to academic and professional development, and student support.

Methodology:
The University of Birmingham Student Healthcare Professionals Study (SHarPS) is a prospective study of students entering courses in the healthcare professions (medicine, graduate entry medicine, dentistry, nursing, pharmacy, physiotherapy). All students in the 2016/17 entry at the University of Birmingham have been invited to participate in the study. At course commencement students were asked to complete an online survey which collects data on demographic, family and other characteristics, and personal information relating to factors influencing their university application, and their aspirations and concerns. Students will be asked to complete future surveys on an annual basis throughout their degree courses and post-graduation.

Results:
Across all courses 745 (69%) students completed a survey with response rates varying from 25% to 82% across courses (mean course response rate was 63%). Free text responses to questions relating to career and university choices, and concerns about commencing the course will be analysed and themes presented.

Discussion:
The collection of this data not only provides valuable information to healthcare profession programme planners and deliverers, but also provides a foundation for the tracking of students in the healthcare professions over the course of their degree and into employment. This will enable us to gather data to try and understand the relationship between academic and professional development and wellbeing, and various characteristics and other potential influencing factors.

References:
2) Goldacre MJ, Davidson JM, Lambert TW. Career preferences of graduate and non-graduate entrants to medical schools in the UK. Medical Education 2007;41:349-61.

Ref: 253, Wednesday 21st June, 3.40-4.00pm, Seminar Room 4
Facilitators and barriers to teaching undergraduate medical students in primary care: The GPs’ perspective
J Barber, S Park, H Randles, H Marshall, P McDonald, K Jensen, R McKinley, H Alberti
University College London

Background:
Currently primary care delivers 13-14% of undergraduate medical teaching UK-wide.[1] Some medical schools are experiencing an increasing challenge to recruit GP teachers in practices facing increasing and competing demands from service and simultaneous expansion of postgraduate training. The length and quality of medical students’ exposure to primary care influences their later choice of specialty so failure to recruit and retain GP teachers threatens NHS England’s aim to increase GP numbers by 5000 GPs by 2020. [2-4] There has been no research on UK GP motivation to teach since the 1990s although some has been conducted overseas.[5-9] We seek to identify and understand contemporary motivators and barriers for primary care engagement with undergraduate education in the UK.

Methodology:
Semi-structured interviews were undertaken with 25 GP teachers at four UK Medical Schools including urban and rural and those using modern and more traditional curricula. Three groups of participants were purposively sampled: GPs who have recently commenced teaching in a practice or are increasing their commitment, established GP teachers and GPs who have recently stopped teaching or are decreasing their commitment. The interview schedule was developed using literature review and discussion amongst the research group. Interviews were audio-recorded and transcribed. NVIVO was used to facilitate thematic analysis of transcribed interviews using both deductive and inductive approaches. This study was funded by the ASME small grants scheme.

Results:
Key motivators reported by GPs were keeping up-to-date, enjoyment, variety and promoting GP as a career. GPs perceived medical schools as facilitators through provision of prompt feedback. Teaching skills courses were cited by some as a major stimulus to commence teaching. Our analysis shows a distinction between partner and salaried/locum GP perspective on barriers to teaching related to autonomy over time and funding. Partners described a lack of autonomy due to ever increasing service demand and decreasing pay, which is insufficient to replace lost clinician time, as fundamental reasons to stop teaching. Conversely, salaried and locum doctors mentioned greater autonomy over working hours as a major reason to teach. Multiple practices have stopped undergraduate teaching in favour of postgraduate GP training because of service contribution of, and a longitudinal relationship with, trainees. Some teachers had proactively contacted medical schools demonstrating that current recruitment practices miss potential recruits. GPs suggested use of a broader range of recruitment methods such as social media.

Discussion:
This study highlights a number of crucial factors which influence GPs’ decisions to teach undergraduates including the pervasive negative effect workload pressures and inadequate funding have on education of students in general practice. On-going lobbying by the Royal College of General Practitioners and Society for Academic Primary Care is crucial to support recent recommendations by both the 2016 Health Select Committee, and Health Education England/ Medical Schools Council report, that the ‘government accelerate their work to create a payment mechanism which reflects the true cost to GP practices of teaching medical students.’[10,11] This work highlights that there is untapped teaching capacity in general practice and that medical schools must consider reviewing recruitment methods to ensure full coverage of an ever changing workforce comprising increasing numbers of salaried and locum GPs who may be excluded from current communication with practices.[12] Social media may offer solutions. A clearer understanding of the barriers and facilitators that have emerged in our study will aid medical schools to recruit and retain GP teachers for the NHS of the future.

References:


Ref: 252, Wednesday 21st June, 4.00-4.20pm, Seminar Room 4
Title: An ‘hour on-call’: A low-cost, resource-light, simulated on-call experience to improve medical student confidence in skills for working on-call

Author: B J Davies

Institution: Peterborough City Hospital, Peterborough, UK

Background:
The theoretical knowledge taught in medical schools does not directly help students to learn the practical side of medicine required to safely care for patients as a qualified doctor. New medical graduates must feel able to contribute to patient care from day 1. However, a 2014 GMC report concluded that 1 in 10 UK medical graduates felt poorly prepared to start work(1). Many students entering their first year of postgraduate training report concerns and anxiety in prescribing, managing acutely unwell patients, communication and prioritisation(2–6). This low-cost, resource-light teaching session was designed to help prepare final year medical students for work as an FY1 doctor, by allowing students to manage common on-call scenarios in a simulated environment.

Methodology:
The premise of the ‘hour on-call’ was “You are the FY1 providing ward cover for 1 hour in the evening between the day team and the night team”.

After briefing and a simulated ‘handover’ of 3 ‘patients’, each student spent 1 hour ‘on-call’ on real medical wards in a district general hospital, reviewing simulated patients and completing tasks relating to each ‘patient’. ‘Patients’ were represented by folders containing fictitious notes, observations, drug charts, relevant investigations and guidelines. During the hour, students were paged with further tasks such as re-writing drug charts, treating ECG changes secondary to hyperkalaemia or managing a patient slipping into a hypoglycaemic coma, which they had to prioritise and complete as appropriate. Following the simulation, students were de-briefed individually on how they had performed, allowing for personalised feedback. Each scenario was then evaluated in greater depth as a group. Students completed a questionnaire before the session to gauge their prior experience of on-call work, their confidence in 6 aspects of on-call work (using a 5-point Likert scale) and any specific concerns about being on-call. Students then completed a similar questionnaire after the session to assess whether their confidence levels had changed, and whether the session had raised any new concerns.

Results:
35 students took part in the sessions over a 12-month period. 31/35 students (89%) had previously spent time on-call with doctors; 1/35 (3%) reported having spent time independently reviewing patients; 32/34 (94%) wanted to spend more time on-call within their medical school curriculum. The session increased participants’ perceived confidence across all 6 outcomes measured (understanding of what being on-call involves, acute patient management, knowledge of when to escalate, handover of unwell patients, prioritisation, and documentation in patient notes; Wilcoxon signed rank test p

Discussion:
Previous work has shown that simulated on-call sessions can help to improve medical student confidence in acute patient management, prioritisation and communication, but these have used expensive dedicated simulation labs/centres(7–9). The session described above, however, uses only 3 bleeps, a room with a phone, access to 3 wards, fictitious patient files and 2 junior doctors. Although cheap and relatively resource-light to run, a key limitation of this session is that it needs a significant amount of facilitator time, since it requires a 1:1 facilitator to student ratio. In addition, the data for the usefulness of the session is Kirkpatrick level 1 evidence (participant feedback taken immediately after the session, within the same environment as the teaching session).

Despite these limitations, this simulated ‘on-call’ session, which was run with relatively few resources and without expensive simulation equipment, allowed students to practise on-call scenarios in a safe environment, and improved their perceived confidence in key areas related to working on-call as an FY1 doctor. This template for teaching is flexible, and can easily be adapted to specific students, and incorporated into medical teaching at various stages of education.

References:

Ref: 231, Wednesday 21st June, 4.20-4.40pm, Seminar Room 4
‘Nephrophobia’ – final year medical students’ perceptions of undergraduate nephrology teaching
I Ali
Salford Royal Hospital

Background:
Nephrology is taught in the undergraduate curriculum of all UK-based medical universities but students often report that it is a challenging specialty to learn. This study sought to explore final year medical students’ perceptions of the subject and obstacles that hinder a better learning experience.

Methodology:
An e-mail was sent to all UK-based universities to invite final year medical students to complete an online validated questionnaire. After four weeks, the results were analysed.

Results:
There were 102 respondents from 7 different universities. The percentage of ‘excellent’ ratings students gave to taught topics in nephrology are as follows: renal physiology – 19%; acute kidney injury (AKI) – 20%; chronic kidney disease – 14%; glomerular disease – 9%; renal replacement therapy – 7%. Nephrology was found to challenging to learn by 95% of students. When compared to learning other medical specialties, it was harder than cardiology (49% of respondents), respiratory (70% of respondents), gastroenterology (73% of respondents) and rheumatology (58% of respondents). Forty-two percent of respondents thought it was easier to learn than neurology although 41% felt it was about the same difficulty. The top 5 reasons given for why it is difficult included nephrology appearing complex, the lack of clinical exposure (only 50% had undertaken a clinical placement in nephrology, lasting 4 weeks on average), a consensus attitude amongst peers that nephrology is difficult, difficulty understanding nephrology from learning resources and an overall lack of teaching. Glomerular disease was the most cited topic found challenging. Finally, with respect to clinical care, only 32% of final year medical students agreed they felt confident in managing patients with AKI.

Discussion:
The students in this study considered the undergraduate teaching of nephrology to be poor with the vast majority finding nephrology challenging. A number of reasons for this have been afforded such as a lack of clinical exposure and teaching, both of which can be remedied by investing more time to nephrology within the curriculum. What is more challenging to overcome is the pervasive attitude amongst students that the subject is inherently complex. This is similar to the obstacle students face with learning neurology, referred to in the literature as ‘neurophobia’[1]. The findings of this study are in keeping with work done by Flanagan et al [2] who showed that nephrology was the second most difficult subject to learn for medical students, just behind neurology. The reported poor undergraduate experience has a negative impact on students who are left unprepared and lack confidence to manage important nephrological conditions such as, for instance, AKI, which is common in clinical practice and confers significant mortality.[3]

Strategies to improve nephrology teaching should not only focus on increasing quantity and clinical exposure but also to de-mystify it as a complex subject in an effort to tackle the presence of ‘nephrophobia’ amongst students.

References:

Ref: 209, Wednesday 21st June, 4.40-5.00pm, Seminar Room 4
Teaching the Teachers: Results from four years of a targeted Medical Education course
K Warren, K Jones
Swindon Academy

Background:
Tomorrow’s Doctors (2009) states that, at the time of graduation, medical students must be able to “function effectively as a mentor and teacher” (1). Given that teaching is now mandatory among medical professionals (2), it is important that we prepare our medical students for this. Indeed, studies suggest that medical students who are familiar with teaching principles may become more effective communicators and learners (3). Here, we present results from the last four years of a two-day medical education course targeted at undergraduate medical students.

Methodology:
Our two-day medical education course is delivered each summer to third and fourth year medical students undertaking a medical education SSC (student selected component) in Swindon Academy. The course is designed to cover essential teaching theory, including: planning teaching, assessment and feedback, and teaching in the clinical environment. Students are also given the opportunity to practice their skills on their colleagues in a “mini-teach” session. Feedback from the course is collected using a 10-point semantic differential scale, with students asked to rate their confidence in various aspects of teaching before and after the course. Free-text boxes are also included for qualitative data collection.

Results:
85 students have attended the medical education course over the last four years. The mean course rating given by the students is 8/10. As full data is unavailable from the first year of our course, further analysis has been performed on 73/85 student responses. Using a paired T-test to compare the students’ self-rated confidence levels before and after the course, the mean differences are as follows: teaching overall (3.2), planning teaching (3.4), providing feedback (3.0), teaching in the clinical environment (3.2) and awareness of different learners (2.8). All mean differences are statistically significant with p values.

Discussion:
Our results demonstrate that our two-day medical education course is an effective way of introducing undergraduate medical students to important teaching theory, assisting them in developing essential skills for their role as future junior doctors and teachers. Following on from this work, we plan to offer the medical education course to a wider audience of students, including those undertaking non-medical education SSC projects and final year medical students soon to become practising doctors.

References:
"Why don’t they just tell us what to learn?"
S Bull, V Nayak, J Tarr, V Moye, C Watkins, L Sims
University of Exeter Medical School

Background:
Problem Based Learning (PBL) is an educational approach with proven benefits, yet students in the early years of medical education often feel uncertain about whether they are meeting the expected learning outcomes. It is important that students learn to make their decisions about ‘what they need to know’ and ‘in how much depth’ but we appreciate that this is a difficult skill to develop, especially for students transitioning from secondary education.

We therefore wanted to introduce a teaching session that could reassure students that they were setting the direction of their own learning appropriately, yet that didn’t undermine of the PBL process by providing students with a check list of what they should have learnt during the PBL case.

Methodology:
We designed a ‘Worry Related Answer Programme (WRAP)’ to be delivered at the end of each two week case unit to the whole cohort of students. During each one hour WRAP session students were expected to apply their recently gained knowledge to questions that were linked to new clinical vignettes. These sessions were interactive and frequently required discussion with peers and the use of response-ware. The sessions were lead by a science tutor and a clinician. Students were able to compare how their knowledge aligned with that of their peers.

An evaluation of this innovation was conducted via the annual course evaluation survey that all first and second year students are invited to complete.

Results:
Seventy nine out of 126 first year students and 76 out of 125 second year students completed the survey (response rate >60%). WRAP sessions were one of the seven areas of the curriculum that were particularly well received by students. Ninety seven % of respondents agreed that the WRAP sessions enabled them to test their case unit learning and 94 % agreed that these sessions enabled them to identify the gaps in their knowledge and direct their future learning. There were frequent free text comments where students expressed positive aspects of the WRAP sessions e.g. ‘they are very interactive and are a great way to memorise knowledge learnt throughout each case unit, and pick up on any areas that I may have missed’ or ‘I like the WRAP sessions as they provide me with an opportunity to identify gaps in my learning’. Yet some free text suggested that students were still struggling with the concept of having to decide for themselves what they needed to know - ‘I think PBL is an effective tool for consolidating our learning, however I think that perhaps creating the questions in the first session isn’t very stimulating and I don’t feel I gain a lot through that process. If we were provided with a basic set of questions to answer then we could bypass this time consuming process. This would also ensure we cover all the learning objectives and stay fully on track’

Discussion:
Learning to set your own direction is a threshold concept. Students will take different lengths of time to develop this skill and feel confident with this process. It is clear, however, that some of the uncertainties that students experience when they are learning through a PBL cases, can be addressed by providing additional scaffolding that avoids simply telling the student ‘what they need to learn’.

Ref: 204, Thursday 22nd June, 4.00-4.20pm, Seminar Room 4
Gynaecological examination: does medical student gender affect clinical learning?
A Burahhee, T Wallbridge, A Holden, J Gupta, A Picton
Institute of Clinical Sciences, University of Birmingham

Background:
Medical graduates should be competent in bimanual vaginal examination as well as associated skills such as the use of a speculum and swabs (1,2). After learning in a simulated environment, for example with part-task trainers or Gynaecology Teaching Associates, students need to engage in deliberate practice in a clinical environment (3). This requires patients to consent to examination by a student, which usually occurs in addition to examination by a clinician and is almost exclusively to support students’ learning (4).
Previous research highlights that male medical students may perform fewer gynaecological examinations before graduating than female students (5). Some patients may prefer to be examined by a female student (6). Additionally, clinicians may display either conscious or unconscious discrimination towards male students when acting as ‘gatekeepers’ to patients (7). This could impact male students’ confidence and competence in this skill, as well as their wider involvement in clinical attachments to Obstetrics and Gynaecology (O&G) and Genitourinary Medicine (GUM).

Methodology:
A cross-sectional study via online survey questionnaires examined medical students’ clinical experience in O&G and GUM settings. Questionnaires explored degree of participation, impact of gender on learning experience and self-reported confidence at the end of placement.

Results:
372 questionnaires were completed: 267 by female students and 105 by male students. Of these, 139 discussed experience in O&G, 233 discussed GUM. 65% (n=68/105) of male students perceived their learning experience to be at a disadvantage due to their gender compared to 1% (n=3/267) of female students (p more likely than male students to be granted consent to observe vaginal swabs being taken (p=0.02) as well as to perform vaginal swabbing (p=0.01), speculum examinations (p=0.01) and vaginal bimanual examinations (p=0.03). 20% of male students (n=22/105) were declined consent to be present during consultations compared with 1% of female students (n=3/266). Similarly, 18% of male students (n=19/105) were declined consent to observe examinations, compared with 2% (n=4/267) of female students.
Despite this there was no statistically significant difference at the end of the attachment between male and female students in self-reported confidence at performing gynaecological examinations.

Discussion:
The majority of male students perceived that their gender significantly impacted their clinical experience of O&G and GUM specialties. Although male students reported performing and observing fewer examinations, they reported comparable levels of confidence in their examination skills at the end of the attachment as female students. This could reflect varying approaches to competence between genders and possible overconfidence in male students.
Students who observed an examination being performed by a clinician were more likely to perform the same examination. This may demonstrate development of rapport and trust with patients, but also how the clinician may act as gatekeeper.

References:

Ref: 203, Thursday 22nd June, 4.20-4.40pm, Seminar Room 4
"Just a GP": Active denigration of General Practice as a career choice.
K Merritt, H Alberti
Newcastle University

Background:
There is currently a national General Practitioner (GP) recruitment crisis with only half of GP trainee places in some areas being taken. Many influences are known to affect students’ and young doctors’ career choice; one such influence is their clinical teachers. Previous research studies demonstrate that there is a high prevalence of ‘badmouthing’ of General practice to medical students and most of these negative comments come from hospital doctors. General practice is persistently portrayed as a second-class career within the hospital setting, and it seems to be placed at the bottom of the perceived hierarchy of specialties that exists.

Methodology:
We conducted an explorative, qualitative study asking groups of GP trainees about comments made to them, both positive and negative, by all clinical teachers, towards their stated choice of General Practice as a career. New GP trainees from the two largest training programmes in the Northern region (HEE Northeast and North Cumbria) were invited to participate and six focus groups were conducted using a semi-structured question format. Full transcripts of the focus groups were thematically analysed by the research team.

Results:
Participants reported numerous incidences of predominantly negative comments being made to them as students and trainees about General Practice as a career choice. Active denigration of GP as a career was evident though not consistent to all participants and the highest number of negative comments about GP came from Hospital Consultants. A recurring theme was the notion of trainees becoming “just a GP” and GP was consistently referred to and viewed as a lesser career and inferior speciality, predominantly by secondary care colleagues. Additional themes identified related to specific perceptions that General Practitioners have a ‘lack of clinical skills’ and ‘lack of knowledge’ by hospital doctors. Trainees were told they were “wasted as a GP” and GP was considered a career for individuals who had failed to gain a training place in other specialities. Further themes related to the student or junior doctor’s previous experience in GP during training, and a negative experience dissuaded individuals from considering GP as a career choice. Participants felt that there was a lack of exposure to GP in medical school and this lack of exposure supported the stereotype opinions that GP is a lonely career and an ‘easy option’.

Discussion:
Positive comments were also reported to a lesser extent; these most commonly were linked to the concept of role models. Inspiring GPs encouraged individuals to choose General Practice training and the GP training programmes were regarded as supportive and of a high standard. Individuals who had had a positive experience in GP in medical school or foundation training were more likely to choose GP as a career and secondary care colleagues had perceptions that GP offered a good work/life balance. Overall, participants felt that negative comments had not influenced their own career choice but may have led to their colleagues not following a career in General Practice. Our findings disturbingly show that active denigration of GP as a career choice does exist in the hospital setting in our region but also within General practice itself. We would strongly recommend that further explorative work and quantitative surveys are undertaken to explore the extent to which these findings are confirmed and to what extent they are influencing career choice. Badmouthing of General Practice as a career must be addressed urgently as a discriminatory issue.

Ref: 197, Thursday 22nd June, 4.40-5.00pm, Seminar Room 4
Getting old before your time: does an ageing simulation suit change undergraduate medical students’ approach to elderly patients?
C Ashton, O Gokhale, K Jones
Swindon Academy, Great Western Hospital, Marlborough Road, Swindon, SN3 6BB

Background:
Doctors and medical students alike have increasing pressure placed on their time and elderly patients may suffer poor quality care as a consequence of this(1-3). Medical students need to understand the effects of ageing and consequent challenges in carrying out daily activities. This is a difficult concept to teach and for medical students to understand, particularly for those who have no personal experience of this.
The ageing simulation suit is designed to give the more able-bodied the opportunity to experience some of the physical and sensory impairments an elderly person may have such as reduced joint movements and narrowing of the visual field.

Methodology:
After an initial focus group, we designed an ageing workshop for medical students to participate in during their rotation in geriatric medicine. Students are given a pre-workshop questionnaire which explores their current ideas about ageing and their learning aspirations from the session. They then have the opportunity to carry out three tasks based on activities of daily living, with and without the suit and the time for task completion recorded. The tasks are making a cup of tea, putting on shoes and tying the laces and picking a tablet (represented by a plastic button) up off the floor. The session is concluded with a post-workshop questionnaire to assess learning, based on previous nursing studies (4) and focus groups with further discussion about their learning experience.

Results:
Following the first of six workshops planned for the academic year, all students agreed or strongly agreed that they had a better understanding of the difficulties elderly patients may have in carrying out daily activities and agreed that they would allow more time for assessing elderly patients. Some commented specifically that they would have more “patience for elderly patients” in their clinical activities and following this experience would “take a more detailed social history.”
Further thematic and descriptive statistical analysis of the questionnaires and focus groups will be available on completion of the planned workshops.

Discussion:
Following on from the initial workshop, we hope that the ageing simulation suit will play an important role in teaching medical students the challenges of ageing and will result in improved clinical practice and patient care.

References:
4. McLafferty E. Developing a questionnaire to measure nurses’ attitudes towards the hospitalised older people. International Journal of Older People Nursing. 2007 2(2) 83 – 92

Ref: 173, Thursday 22nd June, 5.00-5.20pm, Seminar Room 4
Implementation of Teaching on LGBT Healthcare: A four-year review
D Cahill, AK Taylor, H Condry
Bristol

Background:
Lesbian, gay, bisexual and transgender (LGBT) patients represent a significant proportion of the population (at least 2.5% in Britain)(1). LGBT people may experience social isolation, putting them at risk of alcohol abuse, mental health problems, substance misuse, and poorly-managed physical health problems. All these can affect the health status of this population(2,3)(4). LGBT patients may also face numerous barriers to healthcare, including poor communication, lack of knowledge among doctors about LGBT health needs, and poor provision of care(4). Ignorance of health inequalities contributes to misallocation and wasting of resources. However, medical students with increased knowledge of and exposure to LGBT patients take more comprehensive histories, hold more positive attitudes, and have greater awareness of LGBT health concerns than students with little or no exposure(5). Despite this, there is little evidence of LGBT-focused medical education. We introduced and evaluated the effect of a half-day teaching session focused on LGBT healthcare, delivered to Year 2 students.

Methodology:
Initial informal discussion with Year 2 and Year 3 students suggested that awareness of health inequalities other than sexual health was limited, and that students had little awareness of other issues such as gender dysphoria and heterosexism. We therefore targeted these areas when developing the material.
The session was divided into two sections, a lecture and a workshop. The lecture provided an introduction to issues around legislation, transgender health and health inequalities, while the workshops involved a role-play focused on gender dysphoria, followed by small group discussions on topics such as heterosexism and sexual identity. Volunteer peer facilitators, some of whom identified as LGBT, undertook a two-hour training session to ensure they were comfortable with both the material and group facilitation. Students completed a short questionnaire before and after the session.

Results:
Feedback was gathered from 350 students between 2012 and 2015. 69% students rated their competency level higher after the workshop, suggesting they felt better prepared to consult with LGBT patients, and no student considered that the workshop had had a negative impact. Free text comments suggested that the sessions are useful for students in terms of improving awareness of health inequalities and enabling consultation skills practice in an informal environment. Students commented that they had a better understanding of inclusive clinical practice. They appreciated being taught by a facilitator who identified as LGBT and had themselves experienced challenges negotiating the healthcare system, but this was not considered necessary for quality teaching.

Discussion:
The literature suggests that this is a neglected area in medical education, and this teaching received a consistently positive response. All physicians will treat patients who identify themselves as LGBT; students should therefore receive teaching on health inequalities in this population and have an understanding of health promotion within this demographic group. Since 2012, the workshop material has been adapted by other universities for undergraduate education, and has been adapted in Bristol to be delivered to medical educators, receiving positive feedback. By implementing this teaching we influenced Bristol medical students and educators, and improved student-patient and clinician-patient interactions through emphasizing the diversity of the patient population and encouraging the use of more inclusive language.

References:

Ref: 171, Thursday 22nd June, 5.20-5.40pm, Seminar Room 4
Size of Sepsis in Wales: a nationwide point-prevalence study driven by medical student data collection and the Welsh Digital Data Collection Platform

RM Lundin, M Kopczynska, B Sharif, T Szakmany
Welsh Digital Data Collection Platform / Cardiff University

Background:
Sepsis in the UK is estimated to be responsible for the deaths of 44,000 people every year and cost the NHS £2.5 billion. For Wales, this could equate to 2,400 deaths and a cost of £125 million. Data on sepsis prevalence on the general wards is lacking in the UK and in the developed world. We conducted a series of three multicentre, prospective, observational studies of the point-prevalence of patients with sepsis or severe sepsis on the general wards and Emergency Departments (ED) in Wales in years 2014-2016. The studies involved hundreds of undergraduate medical students who acted as local hospital leads and data collectors.

Methodology:
In 2014, a feasibility pilot study was carried out in collaboration between the Cardiff student research society (CUReS) and academics. The measurement of the prevalence of sepsis on medical wards was performed in 4 hospitals in South East Wales by 80 students involved in data collection over 24 hours. Patients over 18 years with a National Early Warning Score (NEWS) of 3 or above were screened for signs of infection using a dedicated tool. In the following year, the study was scaled up to cover 16 Welsh hospitals, serving a population of 3 million. This study involved 184 medical students and introduced an improved method of data collection by using data collection forms on tablet devices. The resulting solution, the Welsh Digital Data Collection Platform, is currently being made available for free to researchers and students in Wales.
In 2016 study, which aimed at investigating new definitions for sepsis diagnosis, another 124 students participated and collected data from patients in 13 hospitals across Wales. The data collectors were Cardiff University medical students and foundation year doctors who had previously participated in the project.

Results:
The pilot study in 2014 established a baseline of sepsis prevalence in 4 of the 16 acute hospitals. It also revealed several limitations in paper-based data collection method, such as poor completion, missing or illegible data and poor security of the paper forms.
In 2015, due to scaling up and introduction of electronic-based data collection, 1198 digital data collection forms were collected. Out of 5314 in-patients screened, 1108 patients had NEWS ≥3. 466 had SIRS. Sepsis and severe sepsis prevalence was 4% and 1.9%. Out of the 141 severe sepsis patients only 17 received the full Sepsis 6 bundle. As data was already digitised this allowed data analysis immediately after the data collection period. The data from 2016 study is currently undergoing analysis.

Discussion:
The training of the participating students evolved throughout the years of carrying out the study and their roles expanded. The number of the local hospital leads increased to provide the most optimal coverage of the needs of student data collectors. Each hospital lead received a face-to-face training with the study chief investigator. All data collectors were provided with e-learning modules and educational videos containing the essential information about the study aims and methods as well as pathophysiology and clinical features of sepsis. Moreover, real-time monitoring of devices and troubleshooting via web-chat groups was introduced in 2015 to increase interaction with students and provide safety-netting. Through the three prevalence studies we have learned that it is possible to operate a digital data collection platform that allows small pilot projects to be scaled at a national level in Wales. We have also learned that medical students can play an important role in data collection to gather evidence that improves patient outcomes.

References:
Effectiveness of resilience training on the mental health of medical students and doctors
S Jawad, S Lynch
University of Southampton

Background:
It is well documented that medical training and practice has detrimental effects on the mental health of doctors and students. Interventions have been designed to counteract and prevent such effects. There is a growing need to analyse and review said interventions. A systematic review was conducted focusing on two aims. 1) To identify and analyse interventions that aim to support medical student and doctor mental health. 2) To examine and compare the effectiveness of resilience interventions on the mental health of medical students and junior doctors.

Methodology:
In November of 2016 MEDLINE, EMBASE, CINAHL, AMED and PsycINFO online databases were searched for interventions, published in English, which focused on improving the mental health of doctors and medical students. A variety of key words and MeSH terms were used. Of the 1906 unique studies returned from the search, 33 quantitative studies were deemed appropriate to include in the systematic review. For the purpose of this presentation, only papers focusing on medical students were included. The reporting of the systematic review was prepared using the Preferred Reporting Items for Systematic Review and Meta-Analysis Statement.

Results:
In total, 19 papers were analysed. These included randomised-controlled trials (11), non-randomised controlled trials (5), uncontrolled before-and-after studies (2) and a cohort study (1). Interventions included mindfulness-based stress-reduction (MBSR), resilience training, yoga, stress management, mind-body therapy, electro-acupuncture, self-development programmes, an organisation-directed student wellness programme and other psychological-based therapies. There was a wide heterogeneity of measures and outcomes used, most of which were self-reporting in nature. The most common outcomes measured were anxiety, depression and stress. Of the above interventions, those found to have a significant decrease on anxiety, depression and stress included: MBSR, yoga, self-development programmes. Interesting the only programme to lead to a significant decrease in all three major outcomes was the organisation-directed student wellness programme.

Discussion:
There is significant evidence supporting the effectiveness of such interventions to improve the mental health of medical students. From the results it is clear that there is consonant evidence across heterogeneous interventions but also contradictory evidence between homogenous interventions. Mindfulness, yoga and meditation were common themes in significant reductions in adverse mental health outcomes. The results suggest that a combination of organisational and individual directed interventions can be the most effective. It is clear however, that the field is hindered by lack of unified methodology and concept definition. It is imperative that if the field is to move forward and become actionable as evidence-based medicine, higher quality interventions with a unified methodology is needed.

Ref: 164, Friday 23rd June, 9.20-9.40am, Seminar Room 4
An Undergraduate Medical Education Society: Our Experience
M Parker, N Wyatt, C Rothwell, B Beska, A Nixon
Royal Victoria Infirmary, Newcastle

Background:
The concept of "near peer teaching" is defined as the teaching of junior trainees by seniors one or more years ahead in training. The benefits of near-peer teaching for both teacher and learner are well recognised in medical education literature; the further the educational gap between teacher and student, the less connected learners feel to teachers. Successes are thought to stem from the idea of 'cognitive congruence' which postulates that 'near-peers' have better understanding of the position that junior peers are in, having experienced those situations more recently. Benefits for the teacher include development of leadership, and encouragement of intrinsic motivation for teachers to study and consolidate their knowledge.

The Newcastle Medical Education Society was established in 2010. It is an undergraduate society ran by a team of senior medical students that encourages near-peer teaching through the production of curriculum-focused preparatory sessions for Newcastle University MBBS examinations and assessments. All sessions are organised, prepared and taught by senior medical students and foundation doctors in the Northern Deanery.

Methodology:
We performed a review of feedback of a variety of sessions ran by the medical education society over the last two years in order to evaluate the benefits of near-peer teaching across a range of settings. Sessions evaluated spanned a host of pre-clinical and clinical topics. Sessions teaching both academic skills such as critical appraisal, and clinical skills were evaluated. Various teaching methods were examined, including didactic lectures, small-group seminars and interactive workshops.

At the end of all revision sessions, a standard feedback form is distributed. Questions asked about; the quality of presentations, relevance of teaching to the MBBS curriculum, teacher's knowledge and teaching quality, and asked students to rate each aspect out of 5 with 5 being the most positive score. The form has been distributed both in paper and online forms containing the same questions. Additional free-text questions to allow students to identify particularly good aspects, or those that require improvement.

For each session, scores were collated in a spreadsheet and average scores for each aspect were calculated. Scores were then compared between different revision sessions to assess which were best received. Free-text comments were also analysed and coded to assess for recurring themes within the qualitative data.

Results:
The process of evaluating data regarding more recent revision sessions are still ongoing. However results from earlier sessions illustrate that both pre-clinical and clinical revision sessions score similarly in all four aspects assessed; style of presentation, relevance, teacher knowledge and teaching quality. All sessions are rated >4 in all aspects. Free-text comments frequently mention relevance, relaxed learning environments and appreciation for exam-focused tips. Although feedback was generally positive, in the one session that received the worst feedback in which there was a larger educational gap between teacher and learners, notably between post-F2 and fourth year. Academic skill sessions were also not rated as highly as clinical skill sessions or exam content sessions.

Discussion:
The evaluation of feedback from this vast range of MedEdSoc sessions illustrates clearly the benefits of near-peer teaching across a range of teaching environments and topics. Success manifests due to through creation of relevant materials, and knowledge of not only revision information, but situational awareness of the position that learners are in, making the teachers seem more approachable and the learning environment more informal. Near-peers become more realistic role models for students, as they are at an educational level more immediately attainable than those much more senior. Further work is required to assess benefits of teaching for teachers to complete evaluation of this near-peer teaching project.

References:

Ref: 136, Friday 23rd June, 9.40-10.00am, Seminar Room 4
Capturing missed opportunities for feedback: a medical school’s experience of using LiftUpp™

T Bird, L Quinn, M Hamilton
University of Leicester -- Leicester Medical School

Background:
Targeted, specific and timely feedback is important for student learning and development1,2. However, giving well-timed feedback is challenging and often not done well3. The literature suggests numerous reasons for this, including: students not realising when feedback is being given, problems with collection of feedback data, and not recognising all the opportunities for giving feedback4. E-assessment tools are beginning to be seen as helpful to give feedback in situations which would otherwise be missed5,6.

Working alongside LiftUpp™ (a cloud- and app-based longitudinal feedback platform)7 we adapted the tool for use in a Medical School setting. The tool, accessed via an app interface, would facilitate timely, personalised feedback from staff to students, helping to capture opportunities for feedback that had previously been missed. Here, we describe the process of customising the LiftUpp™ Develop tool, and its implementation with our current Year 1 students.

Methodology:
We customised the LiftUpp™ platform and piloted its use with Year 1 medical students (n=247) entering in 2016. A significant portion of the early curriculum involves learning in campus-based small group work (SGW) activities, rather than in a clinical setting. We therefore had to identify what feedback could be provided to students in this context.

By reviewing the GMC’s Outcomes for Graduates (OfG)8 and drawing on our experience of facilitating SGW activities, we identified 12 ‘skills, attitudes or behaviours’ that could potentially be observed in this setting. These 12 were ‘mapped’ to the main outcomes detailed by the GMC OfG notably relating to knowledge and skills, professionalism and teamworking. They were collated into a form, and grouped into three main headings: Knowledge, Professionalism, and Leadership and Management. A free text comments field for use by staff facilitating the SGW sessions was also included.

We kept with the original LiftUpp™ framework of a 6-point developmental indicator scale, but adapted this for our use. We chose to make each point in the scale correspond to behavior appropriate to the year of study. This allowed application of the indicators across all 12 parameters, and ensure that the scale was easily interpretable by students and staff. We wanted feedback during this initial implementation to be predominantly positive and encouraging.

Results:
There was good engagement by teaching staff, capturing a total of 687 instances of feedback in the first four weeks alone. In this same period nearly 60% of students received at least one positive observation, with 34% receiving >5. There were 204 observations relating to professionalism, 219 relating to knowledge and information gathering and 335 to teamworking and leadership.

Discussion:
Leicester Medical School is the first to utilise LiftUpp™ in medical training. We have been pleased with engagement by staff and students and the amount of feedback given in this short period of time, within a limited number of settings. Interestingly, approximately 1/3 of feedback was relating to professionalism, an area we have often found difficult to provide positive feedback.

If feedback occurs regularly over a period of time, and is framed in the context of the activity in which the student is engaging, patterns or trends in a student’s development can be identified. With this in mind, we hope to expand the scope of LiftUpp™ across our curriculum, into multiple settings, which would capture 1000s of instances of feedback previously missed. This would generate a detailed picture of student performance which empowers both staff and students.

References:
3. Gibbs G. Using assessment to support student learning [Internet]. Winchester; 2010 [cited 2017 Jan 9]. Available from: http://repository-intralibrary.leedsmet.ac.uk/


Ref: 132, Friday 23rd June, 10.00-10.20am, Seminar Room 4
How much anatomy do medical students think they need to know? A student evaluation at a UK medical school of the new Core Regional Anatomy Syllabus and their perceptions of deficiencies in anatomical knowledge.

C Luscombe, C Smith
Brighton and Sussex Medical School

Background:
The new Core Regional Anatomy Syllabus (CRAS) was published in January 2016, describing the working knowledge of anatomy that students are expected to leave medical school with. The views of those delivering the new syllabus have been clearly defined, however data has yet to be collected on a key stakeholder group, the students to which the syllabus is being delivered. There is also limited research into how much anatomy students perceived deficiencies in anatomical knowledge and how much anatomical knowledge students perceive they know at different stages in the medical school curriculum.

Aims: To elicit the student perception of how relevant each of the learning outcomes (LOs) is to their future practice, and how this relates to perceived deficiencies in anatomical knowledge throughout the curriculum.

Methodology:
This study used a cross-sectional, mixed methods survey design to collect data from students in the clinical years of the BSMS curriculum. Students were required to determine whether they perceived each learning outcome of the new CRAS as essential, important, acceptable or not required. In addition to the LOs being reviewed there were 3 key characteristic items and 6 items based on student perceptions of knowledge deficiencies and retention, making a total of 173 items. Quantitative data was analysed using descriptive statistics, qualitative data was analysed using generic thematic data analysis.

Results:
Data was collected from years 3 (n= 74), 4 (n= 48) and 5 (n= 42) of the curriculum. The extent to which students perceive a LO as relevant varied dependant on the stage of their training and was influenced by multiple factors. Specific regions of the CRAS that were deemed to be less relevant were also the areas that students perceived their anatomical knowledge to be more deficient in. Only 46% of students estimated that they knew over 50% of the LOs described in the CRAS.

Discussion:
The findings of this research have been examined in the context of existing literature to form a series of recommendations to support those delivering the new anatomy curriculum. Through employing teaching and learning strategies to help students find clinical relevance in their anatomy learning, it may aid their retention of anatomical knowledge. The recommendations formed as part of this research may be transferable to other similar institutions as they implement the new CRAS.

References:
"Learning without reflection is a waste" Preliminary results on the use of a Simulation Reflection Scaffold to structure students' learning during simulation training.
J Fukuta, R Rooney, A Coombs and J Morgan
Southmead Hospital, North Bristol Academy, University of Bristol

Background:
“Learning without reflection is a waste, reflecting without learning is dangerous”. The sentiment behind this statement made by Confucius over 2000 years ago, is as pertinent now as it was then, with reflective practice being utilised both in medical education1 and continuing professional development2. Its importance within simulation training is even stronger when looking at the experiential learning cycle3 underpinning simulation training4, which requires reflection to make subsequent improvements. Despite this students are given little guidance nor structure on how to integrate their reflection in a practical way during simulation sessions5. Therefore to make learning from simulation training more effective we wanted to design a scaffold around which students could be guided to reflect on their practice. For inspiration, we looked at Kolb’s experiential learning cycle3 to formulate a structure and designed the Simulation Reflection Scaffold (SRS) consisting of four domains: reflecting on the simulation, evaluating the simulation, identifying learning needs and formulating an action plan. The first part of the scaffold is designed to be filled out straight after the simulation. The subsequent parts are to be filled out during the debrief with space left for any subsequent learning. To increase the ease of use the SRS it was designed to be a concise form with simple prompts for the students.

Methodology:
60 third year medical students will take part in a total of twenty-eight simulation sessions over eighteen weeks. Fourteen of these simulation sessions will be carried out in the standard way within our institution with no structured forms for the students to use during the sessions. During the other fourteen simulations, the students will be encouraged to use the SRS within their simulation sessions. After all the simulations the students will then be invited to a focus group to discern whether the SRS was useful, and if there were any differences noticed by the students in their learning with the use of the SRS. These comments will be analysed using thematic analysis.

Results:
The study is due to be carried out between September 2016 and April 2017, with results analysed by May 2017.

Discussion:
Reflection is seen within some simulation debriefing models6, however there does not appear to be clear guidance to the student on how to reflect on simulation sessions. With the use of the Simulation Reflection Scaffold we hope that students can better structure their reflection and learning. This may enhance the learning experience that simulation training offers by offering more guidance on reflection as part of the learning process.

References:
2. General Medical Council. Good Medical Practice. Article 22b. GMC 2013
4. Lateef F. Simulation-based learning: Just like the real thing. Journal of Emergencies, Trauma and shock. 2010. 3:348-352

Ref: 094, Friday 23rd June, 9.00-9.20am, Seminar Room 5
How prepared are medical students for dealing with end-of-life?
L Jellett, M Boohan, K Cullen
North West Cancer Centre

Background:
All doctors in first year of practice will be exposed to death and dying yet little is known about how prepared medical
students feel regarding management of end of life.(1) This remains a difficult and emotive subject. Since the
removal of the Liverpool Care Pathway for the dying patient there have been no formal guidelines to structure
teaching. The National Institute for Clinical Excellence (NICE) are currently preparing Care of Dying Adult guidelines.
When medical students are exposed to the death of a patient they can be torn between the emotional and
professional aspects of the situation(2). Early exposure and further training may help to alleviate this. This study
used Interpretative Phenomenological Analysis (IPA) as a tool to more fully understand how medical students feel
regarding management of patients at end of life and also how their undergraduate course could be improved to
prepare them more fully.

Methodology:
This study used IPA of in-depth interviews with final year medical students. The researcher explored how prepared
students feel at that point of their career for dealing with end of life care, and factors that may influence
preparedness.
Seven final year undergraduate medical students from Queen’s University Belfast were recruited in March 2016.
Maximum variation sampling was used. Students
were interviewed by researcher in the week prior to their final year assistantship in March 2016 and then again in
the week following the assistantship in May 2016.
Interviews were minimally structured to allow participants to freely discuss issues relevant to their own thoughts
or experiences. Interviews were audio-recorded and transcribed verbatim. Students were invited to complete diary
entries during their assistantship. It was made clear to students that diary entries were not a compulsory element
of the study, but rather would be used to guide themes explored within a second interview.

Results:
Transcripts were analysed by IPA. Three themes emerged from analysis.
Three over-riding themes were identified and explored in detail:
1) What do students feel familiar or comfortable with?
* Students describe their training in pain management and familiarity with opioid usage and conversions.
* Communication is also an area where most students felt confident.
2) Lack of experience as described by students.
* The majority of experience that students describe regarding end of life care falls out-with the undergraduate
course.
* The practice of gate-keeping is described.
* Students feel palliative medicine is a very specialised area.
3) How can medical educators improve students’ preparedness for dealing with end of life?
* Existing training was critiqued by students.
* Specific feedback was given regarding a reflective palliative care exercise.
* The need for earlier exposure was highlighted.
* Students encourage the use of “sign posting”
* The need for both preparation and debriefing was recognised.
Results showed an overall acceptance that more training would be beneficial. There was, however, a lack of clarity
as to what format that training should take and where it could be placed within the current undergraduate course.

Discussion:
This study reinforces the results of previous studies showing that final year medical students do not feel prepared
for dealing with patients end of life. Difficulties exist regarding how and when further training and teaching could
be introduced in order to equip medical graduates with the skill set required for end of life care.
Medical Educators need to make use of existing training opportunities, using sign-posting where possible. This will
require a cultural shift away from the gate-keeping, where students are actively discouraged from engaging with
patients at the end of life. All students participating in the study expressed a wish for further training, however
when asked what format that may take, or where it would best fit in the current curriculum uncertainties were
universal.

References:
Revolutionising feedback: an exploration of barriers and drivers to change
E Woods, R Thomson, J Fisher, J Stewart
Newcastle University and Northumbria NHS Foundation Trust

Background:
All higher education establishments collect feedback from their students, the central purpose of which is to improve the quality of the education they provide. However, concerns have been raised that the collection of feedback has become a ritualistic activity that fails to engage those involved, perhaps because there is little expectation that things will change as a result (1, 2). An internal review within our Trust (a Base Unit for Newcastle University MBBS programme) showed medical student feedback infrequently informed course development. With multiple initiators, poorly articulated intent, and misconceptions regarding the purpose of evaluation, medical students were being repeatedly asked to provide feedback using an assortment of different forms. Our students were in danger of ‘feedback fatigue’.

A new model of student feedback was devised to address these issues and encourage conversations about rotations, teaching and learning. Each week’s timetable was mapped to the MBBS learning outcomes. At the end of the week, medical students were asked to collectively determine whether those learning outcomes had been achieved. Student representatives then met with a teaching fellow to present their findings. These data were passed to the Faculty, who had an opportunity to respond directly to students’ comments. To close the feedback loop, the completed feedback sheets were made available for all students to read and appropriate actions agreed.

To develop our understanding of the values held and the challenges encountered when introducing an evolving fit-for-purpose system for evaluating the delivery of the MBBS programme, an inquiry was designed. The inquiry set out to answer the following questions:
- What changes are made and what instigates or triggers change?
- What might the perception of ‘problems’ and the finding of acceptable ‘solutions’ tell us about how best to implement change?

Methodology:
This study was undertaken as a multiple-loop practitioner inquiry project (3). Data are drawn from two sources: 1. A process diary detailing evidence of the evaluation’s evolution, the facilitators’ and students’ feedback, obstacles encountered whilst introducing changes and rationales for changes in strategy; 2. Three focus groups (scheduled for March’17) will provide insight into the process ‘as experienced’ by three populations (teaching faculty, administration team and medical students), and also gain a deeper understanding of the difficulties encountered. The focus group recordings will be transcribed and analysed by framework analysis to address the two enquiry questions.

Results:
Results will be available to present at the 2017 ASME ASM.

Discussion:
This new model has been welcomed by students and gives tutors a rich insight into the learning processes. Some tutors have raised concerns about the lack of personal feedback they received regarding their teaching style or ‘likeability’. Course Leads are concerned that this lack of ‘rosy glow’ feedback might make it increasingly difficult to recruit tutors. Some tutors question whether an outcome-based model of feedback is suitable for more nebulous areas of the course and highlight concerns that students are increasingly focused on ticking-boxes rather than ‘learning’.

We hope to use our understanding of the factors that lie behind resistance to change to work with our Faculty to reform the way that we collect student feedback and evaluate the MBBS programme. Our broader goal is to draw generalisable principles to support change management within similar educational environments where there are multiple challenges and competing agendas.

References:

Ref: 056, Friday 23rd June, 9.40-10.00am, Seminar Room 5
Dementia Café: much more than coffee
M Devlin, E Lister
Bristol Royal Infirmary

Background:
By 2050 it is projected that one in every thirty-nine people in the U.K. will have dementia. People with dementia have more frequent and longer hospital admissions (1). They are more prone to loneliness and social isolation (2). We need to prepare tomorrow’s doctors to face this global health challenge.
UK medical schools do provide dementia-specific teaching but this is primarily focused on knowledge and skills rather than behaviour and attitude (3). Student attitudes towards elderly patients have been described as poor (4) but do tend to improve following interactions with patients on ward placements. We have attempted to improve student attitudes and behaviour towards dementia with a new exercise.

Methodology:
The dementia café at Bristol Royal Infirmary happens fortnightly in the hospital canteen. It acts as a gathering for inpatients with dementia and their careers to socialise off the ward and take part in activities. A small group of fourth year students were invited to each take a patient to the dementia café for the afternoon. There were no instructions or objectives for the session other than to look after their patient. Specialist dementia nurses and a clinical teaching fellow were present to assist if required.
Data was collected through questionnaires given to students before and after the session. The questionnaires asked students to self assess their knowledge, attitude and behaviour towards dementia as well as free text questions asking for positive and negative aspects to the experience. There was an informal debrief allowing the students to ask questions at the end of the café.

Results:
The session has been carried out three times so far, with a total of seventeen students taking part. All students attended and stayed the full two hours the dementia café was open. The results showed students felt their knowledge, attitude and behaviour towards dementia had improved following the session.
Themes in the free text comments suggested the interaction felt safer, less stressful and was more natural than the ward environment. It also appeared that the patients found the experience hugely beneficial. Although no data was collected, we observed the patients were much more talkative during the session and most remembered the experience for days afterwards.

Discussion:
The results suggest the ‘Dementia Café’ had a positive impact on medical students’ behaviour and attitude towards people with dementia. Whilst the sample size is small, there was unanimous approval from both students and patients alike. We plan to continue to run this exercise, collect more data and provide tips on the best way to run these sessions.
Based on these promising results we would like to expand this trial to include students at other hospitals in the Severn region. We think this session allows for longer and more meaningful interactions with dementia patients and is worthy of a place within the Medical Curriculum.

References:

Ref: 055, Friday 23rd June, 10.00-10.20am, Seminar Room 5
“I cannot believe in myself any more”: a phenomenological study of hopelessness and helplessness within medical education
S Shaw, J Anderson
Brighton and Sussex Medical School

Background:
Hopelessness/helplessness (H/H) were first described in the work of Overmier & Seligman in 1967 (1). Theories of depression implicate both hopelessness and helplessness as causative factors (2). The development of H/H may be explained by exploring the ways that individuals attribute causation to events and the world around them (2). By understanding these theories, educators may be better equipped to understand and support students. It is known that medical students are more susceptible to high levels of depression than other student groups. But what can be said of H/H within this population?
A review of the literature has shown that H/H may be triggered in medical students through stress; a drive to be perfect; and dealing with severe illness or death in clinical settings (3-5). In turn, hopelessness may predict depression and suicidality in the medical student population (6).

Methodology:
An Interpretive Phenomenological Approach was used within a case study design. Participants were recruited from a single UK medical school. Loosely-structured, audio-recorded interviews were carried out with the participants. The recordings were transcribed verbatim. Each transcript then underwent a General Thematic Analysis to form three case studies.

Results:
Three participants were recruited. We outline and analyse their stories individually. Although distinct, all three raise different, important issues – ranging from social isolation to financial difficulties and homelessness. Some of the important themes included:

- Culture shock in medical school;
- Bullying and social exclusion;
- Specific events leading to a sense of Lack of control;
- Self-harm and suicide ideation; and
- Determination

Participants’ stories provide advice to medical educators and others experiencing H/H.

Discussion:
The cases outlined within the project are powerful and emotive. However, they are quite different from one another, highlighting how wide-ranging the causes and experiences of H/H may be. Through being aware of these cases, medical educators may be better equipped to understand and support learners in similar situations. These may also benefit those experiencing H/H themselves. This exploratory project paves the way to future study.

References:
Medical Students Teaching Work Experience Pupils Provides Mutual Value
C Boyd
University of Nottingham Medical School

Background:
Despite being a key element of the medical school application process(1), access to clinical work experience for aspiring medics is hard to achieve, especially for those from lower socio-economic backgrounds where there is often an opportunity-gap created by lack of ‘contacts’(2). The Nottingham WAMS society hosts an annual work experience week, during which, for 3 hours a day, 23 Year 12 pupils are paired with, and are taught on the wards by, 23 final year medical students on placement at Nottingham University Hospitals. The success of this scheme (and any like it) relies on there being mutual benefit for both the medical students (and hence the medical school) and the Year 12 pupils. Past research has demonstrated that near-peer teaching between medical students subjectively developed students’ teaching skills (3,4,5). The study aims to assess whether these benefits are transferable to teaching pre-medical school pupils; hence assessing whether there was personal value to the medical student in being involved. Equally, the study aims to gage response of the Year 12 pupils regarding whether it was as valuable to be taught by medical students, compared to doctors.

Methodology:
The results of post-programme questionnaires undertaken by the medical students and Year 12s were analysed. For the latter, extensive data was taken but for this study, specific emphasis was placed upon the question of whether medical students could ‘inspire’ them as much as the clinical teaching fellow doctors they’d also had teaching sessions with.

Results:
Of the 18 medical students who completed the questionnaire, 100% ‘strongly agreed’, or ‘agreed’ that they would recommend the scheme to other students. 94.44% (17) ‘strongly agreed’ or ‘agreed’ that they would have liked more opportunities like this at medical school. The clear majority, 94.44% (17), ‘strongly agreed’ or ‘agreed’ that the scheme had developed their teaching skills. 77.78% (14) ‘strongly agreed’ or ‘agreed’ that being part of this scheme had prompted them to consider a career in medical education. Feedback from the 19 Year 12 pupils who completed the questionnaire was overwhelmingly positive. 100% ‘strongly agreed’ or ‘agreed’ that they would recommend the programme to others and that they were better now equipped to apply to medical school. It was clear that the students felt that the medical students inspired them, all but one ‘strongly agreeing’ with this. Regarding the teaching fellows, feedback was more mixed with over half the pupils just ‘agreeing’ or ‘disagreeing’ that the doctors inspired them during teaching sessions.

Discussion:
Although measured subjectively, the medical students gained value from their participation, namely in development of teaching skills. Although not a novel conclusion(3,4,5) this shows that the teaching need not be to other medical students for this value to be attained and could, instead, be as part of a work experience scheme like this one. Interestingly, after only this limit(6). The value of the programme was undoubtedly mutual; Year 12 pupils gave encouraging feedback across multiple domains. Specifically, having medical students as teachers, instead of doctors, was a positive factor, rather than a drawback of the scheme. This is in keeping with the value of ‘near-peer’ teaching discussed in other work(3,4,5) indeed, the medical students would have been closer in age and experience to the Year 12s than their doctor colleagues. There is a real need for more secondary-care work experience placements to be available to pupils from ‘widening participation’ backgrounds(2). As this work experience scheme is also of value to medical schools, via benefit to their students, it is something all progressive universities should consider implementing as part of a ‘widening participation’ initiative.

References:
#UnofficialMedEd: The use of social media learning tools as part of a ‘parallel curriculum’ for stage four medical students
J Guckian, R Ker
Newcastle University

Background:
The rise of social media platforms in recent years has implications for medical educators. The literature suggests that social media helps to empower students [1] and access education resources from all over the world [2]. The use of social media tools such as Twitter has been shown to improve engagement and facilitate communication in anatomy education [3].
There has however been little study in the literature regarding the integration of social media into medical curricula.

Methodology:
A ‘parallel curriculum’ was established for a cohort of 250 stage 4 Newcastle University medical students in November 2016. This ran alongside the ‘Clinical Sciences and Investigative Medicine 2’ module, during a one week period focusing on multisystem disease. A hashtag #unofficialCSIM2 was set up, and students were informed about the hashtag during two lectures. The hashtag linked to original content hosted on the social media platforms Twitter, Instagram and Snapchat. The social media handles were run by Medisense, a free online medical education platform set up by the authors. The content was aimed to consolidate knowledge taught during lectures and seminars during the week and featured ‘bitesize’ videos, single best answer quizzes and memory aid images. Two lectures during the week were also ‘live-tweeted’ using the #unofficialCSIM2 hashtag. For evaluation, video views were counted and website ‘hits’ for single best answer quizzes were counted. The students undertook a survey assessing their use of the revision resources and the utility and relevance of the resources, and whether they would engage with a similar initiative in other modules at medical school.

Results:
The online quizzes received 678 unique users per day during the week, whilst on Twitter the #unofficialCSIM2 hashtag received 40,600 impressions. 38% of students in the cohort stated they normally use social media to facilitate their learning. 44% of students engaged with the revision resources, with 83% describing the resources as ‘useful’ in consolidating their learning. 94% felt that similar resources should be made available during other modules in medical school. Detailed feedback was collected, with students feeling that live-tweeting ‘reinforced learning points’ and that the initiative aided ‘unintentional revision’.

Discussion:
This study has demonstrated that students will engage with a parallel social media curriculum. Social media facilitates the sharing of interactive and creative resources, which our students found useful in consolidating knowledge initially taught in a lecture format. Further study in other university settings would be relevant in assessing the benefit of social media use in support of a ‘traditional’ medical curriculum.

References:
[1] El Bialy, S. et al, Go Where the Students Are: A Comparison of the Use of Social Networking Sites Between Medical Students and Medical Educators JMI Med Educ, 2015, 1(2)

Ref: 061, Wednesday 21st June, 3.00-3.20pm, Seminar Room 2
Enhancing student engagement with flipped classrooms and simulations; a study of student perceptions
N Gostelow, J Barber, L Weil, K Swinamer, W Southall, T Ngan, A Berlin
University College London

Background:
Social and health inequalities are a growing problem amongst increasingly diverse populations. The World Health Organisation (WHO) is committed to reduce inequalities worldwide by increasing the role of Healthcare Professionals 1. Enabling medical students to tackle this urgent health issue alongside clinical sciences can be challenging 2. Additionally, year 4 students at University College London Medical School (UCLMS) felt disengaged with the subject and would rather study “clinically relevant topics” (personal correspondence).

Flipped Learning has already been applied to many settings within medical education 3. Learning of theory is performed by the individual prior to attending application exercises and practice within the classroom4. This allows for more clinically relevant exercises in class4 and utilisation of higher levels of Bloom’s Taxonomy5. To engage medical students with the social determinants of health exercises should integrate and apply them to clinical concepts2. This study aims to look at medical student perceptions of a flipped learning approach to health inequalities including the application to taking a social history.

Methodology:
This is an action research mixed-methods project. A flipped learning session was co-produced for year 4 medical students at UCLMS by faculty and final year medical students. The format consisted of an online Self-Paced Learning (SPL) involving quizzes, TED Talks and case studies introducing the principles of Health Inequalities. Students then attended a tutorial where they applied these principles by taking a group social history from a simulated patient. Feedback was collected by questionnaires. A semi-structured group interview will be conducted with students in order to identify student perceptions to this approach to learning, changes in attitudes towards health inequalities, how students perceive pre-lesson assignments and how these affect responsibility towards learning. Qualitative data will be transcribed and coded into themes. This project has been granted ethical approval from the UCL Research Ethics Committee.

Results:
289 students attended the tutorial of which 85% (n=246) had completed the online SPL. 4-point Likert scales showed students agreed the session helped their understanding of key concepts (mean= 3.2), the session was improved by having an actor (mean= 3.6) and they enjoyed the session (mean= 3.2). Results of group-interviews will be presented.

Discussion:
Interim results show high student engagement with good attendance and high uptake of pre-session assignments. Session feedback is also improved from previous years’. Underlying reasons may include a better appreciation of clinical relevance with the utilisation of simulated patients and increased student responsibility for learning and preparation. Co-production of materials with near-peers improved the relevance and enjoyment for students. Limitations of flipped learning include initial set-up time and resources7 and students’ perception of an increased workload7. We will discuss lessons learnt and recommendations for improvement as well as strategies to engage students with diverse topics considering how this can be applied to other specialities facing similar challenges.

References:

Ref: 375, Wednesday 21st June, 3.20-3.40pm, Seminar Room 2
MDTea Podcast - a supplemental learning tool for healthcare professionals
St Georges Hospital Tooting

Background:
MDTea (Multidisciplinary Team Education on Ageing) podcast produces free, open access episodes on topics commonly encountered by those working with older adults. Comprehensive Geriatric Assessment (CGA) is evidence based (1), gold standard care that improves outcomes for older adults; namely being alive and living at home. CGA is a multidimensional, interdisciplinary diagnostic process to develop an integrated care plan for patients. Timetabled learning on clinical topics is usually discipline specific and non authentic to the working environment, learning is a collaborative process. Interactions within our teams are stimuli for learning to occur. Podcasts are an easily accessible way to share information, with the potential to reach wide and varied audiences providing an alternative to both traditional face-to-face and written forms of education delivery. They allow learners to learn flexibly.

Our aims were to:
- Reach a wide audience and establish podcasts as a valid tool for educational delivery
- Reach a range of disciplines working with older adults
- Develop an online community of practice (COP) (2) through social media, website and a mailing list
- Facilitate individual learning for those working with older adults
- Influence practice of listeners

Methodology:
Data was collected from various sources as below. All data was collected in January 2017 following release of 20 episodes over the preceding 12 months. For social media data the last 3 months is presented.
Wide Audience using Podcasts > Download data from server
Range of Disciplines > Mailing list demographics (n=222)
Online Community of Practice > Social media connections and interactions
Individual Learning & Influence Practice > Survey of learners via social media, website and mailing list.

Results:
The first 20 episodes received 23,657 downloads. 100% of survey respondents would recommend the podcast to a colleague.
In the last 6 months the website has received 4,820 visits and over 1000 downloads of the referenced ‘show notes’. 82% of learners are in the UK with most users in London (one of 274 UK towns and cities).
The learners are multidisciplinary: Doctors (35%), Therapists (39%), Nurses (20%) but also managers, pharmacists, HCA s and SaLT. 42% work in primary care and 54% in secondary care. 41% do not identify ‘Geriatrics’ as primary specialty.
Online COP is developing still through twitter (1051 followers) and facebook (234 likes). Mean Twitter impressions are 39,600 per month with peak engagement of 11.5%. Facebook reach is 2060 per month with peak engagement of 10.5%.
Surveyed learners report: widened medical knowledge, better understanding of frailty, better understanding of the challenges faced by patients with dementia, and more holistic patient view. 73% of survey respondents had used the podcast as part of their reflective learning.
94% reported that their practice had been altered by what they had learned including: improved pain management, using new tools in assessment of delirium and improving diagnostic confidence.

Discussion:
MDTea podcast has reached a large varied audience comprising of disciplines representing a typical MDT. The online COP is developing through social media with the sharing of resources and discussion around episodes. Now that we have an established audience this will be a focus for our development alongside the upcoming episodes. The podcasts have influenced clinical practice positively with self-reported increase in knowledge, confidence and use of content for patient benefit. Using podcasts as part of reflective practice suggests that listeners value the content as a supplemental educational resource (3) as part of a constructivist approach to learning (4).
It is encouraging that a large proportion of listeners work outside of the specialist field of geriatric medicine - reflecting real life practice. The data demonstrates that podcasts are an effective way to deliver geriatric education across disciplinary and locational boundaries.

References:

Ref: 299, Wednesday 21st June, 3.40-4.00pm, Seminar Room 2
Massive open online courses: are social learners more likely to complete the course?
VC Rodrigues, E Player
Norwich Medical School, University of East Anglia

Background:
‘Clinical Supervision with Confidence’ is a massive open online course (MOOC) that has been running on the FutureLearn platform since March 2015 (Rodrigues, 2015). It was conceived, developed and delivered by a team of experienced medical educators from Norwich Medical School, University of East Anglia and included learner input at every stage. The course was designed to address learning needs of clinical and educational supervisors of undergraduate medical students and postgraduate medical trainees, in line with GMC (2012) guidance. The FutureLearn platform is designed to facilitate social learning among participants through the use of features of social media (‘likes’, ‘followers’, etc) as well as the use of discussion boards in addition to videos, animations and articles (FutureLearn, 2016). This enables the building of communities of practice that facilitate learner interaction, collaboration, and learning. Over the seven course runs to date, course data, learner feedback and interaction with the educators suggests that participants have greatly enjoyed the interactions, sharing of narratives, etc often as much as the course materials themselves. This MOOC also has a much higher completion rate as compared to other MOOCs. We wanted to explore this theme further to assess whether social learning is associated with course completion among busy healthcare professionals.

Methodology:
Data were obtained from FutureLearn pre- and post-course surveys, and course measures provided by MOOC run to educators. Learner comments on the discussion boards were used to explore learner perceptions of course content, delivery and inter-learner interactions. Within FutureLearn MOOCs ‘social learners’ are those who post at least one comment on any step in the course and ‘fully participating learners’ (labelled here as ‘completers’) are those who completed at least 50% of the course steps and took all the course assessments.

Results:
A total of 11,929 learners have registered for the course to date; of these, 5,426 started the course. Course measures provided by FutureLearn demonstrate that 35.4% (1923/5426) of the participants were social learners who interacted with other participants. This is only slightly lower than FutureLearn’s average of 38% social learners. However, analysis of the completion rates suggests that 34.1% (1850/5426) participated fully in the course; this is significantly higher than the FutureLearn average of 22% (Nelson, 2014). Looking at the proportions of social learners and completers over time, completion rates seem to mirror social learner rates, with an average difference of only 2-3%.

Learner comments suggest that inter-professional 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.

Discussion:
The notion of social learning potentially leading to high completion rates in this MOOC is in keeping with Bandura’s (1977) social learning theory, and Lave and Wenger’s (1990) ‘communities of practice’. This international cohort of learners share a common interest in developing/ extending their supervision skills and learning from each other through sharing ideas and skills, and from more experienced supervisors when faced with challenging situations (Vygotsky’s zone of proximal development - Vygotsky, 1978).

One potential limitation of this analysis is that the course measures used provide only grouped data. Further analysis is ongoing and will use individual level data to test this association.

In conclusion, social learning appears to be associated with completion rates over all 7 runs of our MOOC. Further research is needed to test this hypothesis at individual level and to assess how learners use the new knowledge and skills in their workplace settings.

References:
Technology Enhanced Learning (TEL) is an important aspect of undergraduate medical education for both learning and exam revision: A cohort study of the current final year medical students who used an e-learning module called CAPSULE

T Kurka, S Mitchell, T Vincent, J Fairclough, D Howlett
Brighton and Sussex University Hospitals NHS Trust

Background:
Traditional teaching, combined with technology enhanced learning (so called blended learning), has been shown to enhance knowledge acquisition, improve clinical competencies and exam readiness of the healthcare professionals. [1] This is particularly important as the current generation of students is described as ‘digital natives’ [2] and the ‘net generation’ [3]. The use of the Internet, mobile health apps and e-learning modules is on increase [1] for both learning and exam revision, and it is vital to ensure correctness of the presented information and the relevance of these resources to the undergraduate medical curriculum. We present an evaluation of our e-learning module which has been available to the final year medical students for the past 10 years. The module contains over 660 case-based scenarios, working through over 3,500 questions in all medical, surgical and therapeutic specialties. [4] Furthermore, we present student evaluation data of the new mobile app and web platform (CAPSULE), which the module was upgraded to in 2016.

Methodology:
A paper survey was distributed to the 2016/2017 cohort of 125 final year students enrolled in the undergraduate medical degree at Brighton and Sussex Medical School (BSMS). The students were asked to evaluate the mobile app and website called CAPSULE, which is the new platform for our existing e-learning module. All data was analysed using SPSS.

Results:
64% (80/125) of surveys were analysed, of which 50% of students were male, 47.5% female and 2.5% non-binary. 20% (16/80) of students were mature/graduates. The median age was 24 years (22-41). The resources mostly used for learning were reported: Internet (71.8%)>mobile apps (26.3%)>e-learning exam questions (24.4%)>personal notes (22.1%)>textbooks (21.8%)>lecture sides (10%)>e-books (5.3%). No students reported using podcasts for learning. The resources mostly used for exam revision were reported: Internet (78.9%)>personal notes (53.2%)>e-learning questions (52.6%)>textbooks (44.9%)>mobile apps (42.7%)>lecture slides (40%)>e-books (8.3%)>podcast (2.7%). We found no significant gender or school leavers/graduates differences. 71.8% (56/78) preferred using CAPSULE (BSMS e-module) as a mobile app, 19.2% as a website and 9% as a tablet app. 61% (47/77) reported the module significantly helped with their understanding of clinical conditions, 37.7% helped and 1.3% made no difference. 70.7% (53/75) found the module very useful for exam revision and 29.3% useful. 94.6% (70/74) thought the range of topics was broad, 92.1% (70/76) reported an appropriate level of difficulty and 94.6% (71/75) found the feedback to be of good quality/helpful. 82% (62/80) reported using other commercial e-learning resources but 91% (61/67) preferred CAPSULE over those commercial products. 92.8% (65/70) believed that CAPSULE was helping them to prepare for their job as future doctors. Overall, 92.8% (64/69) reported e-learning was essential for their medical knowledge acquisition.

Discussion:
Medical students place a high value on e-learning resources for knowledge acquisition, and e-learning was ranked as an essential part of their learning. The tree main educational resources for medical students were the Internet, mobile apps and e-learning practice exam questions. This serves as a reminder that medical schools should engage in incorporating such resources in their curricula. Interestingly, podcasts and e-books had a very limited use or no use at all.

The three main criteria of a good e-learning tool were the correct level of difficulty, a broad range of topics covering all the main specialties, and the availability of a high quality feedback. Almost all of the students found CAPSULE (BSMS e-module) to be a very useful new platform for learning, ranking it highly in the quality of clinical teaching, exam revision and preparation for their future jobs as doctors. Furthermore, over 90% preferred CAPSULE over the other commercially available exam revision resources.

References:
Make Wikis Great Again
C Murray
Exeter Medical School

Background:
Wikis are used by Year 1 and 2 students on the MBBS course at Exeter Medical School in conjunction with Problem Based Learning (PBL) Groups, and have been for approximately 16 years. The students have three PBL sessions, each for two hours, over a two week period during which one case is studied. The first session, in the first week, involves case introduction and the making of questions which address the student’s learning needs on the case. The second week there are two PBL sessions where the students “feedback” their answers to their formed questions. The wikis provide a forum for the students to communicate between these sessions. As a PBL facilitator I have observed that the wikis did not appear to be valued by the students or used as effectively as the literature suggests they could be (1,2). Their use was reviewed to consider if the wikis could have a greater pedagogical value.

Methodology:
Permission was sought to access the wikis from Term 2 in 2016. The home page and the use of the wiki for one PBL case was analysed by me, as the sole researcher. The wiki use was then critiqued against Exeter Medical School’s documented guidance (3).
This stated that the wiki could be used for
1. Continuity and consolidation
2. Posting useful information
3. A place for discussion
4. Applying your learning
5. Improving how the group works
6. To develop and demonstrate your professionalism skills

Results:
Ten of the sixteen groups gave me permission to look at their wikis – four in Year 1, and six in Year 2. When examining the wikis against the first 5 criteria the only criteria which all the groups met was using the site for ‘posting useful information’. This consisted of students adding URL links to webpages or articles that they thought helpful to answer PBL questions. 11% of these links were primary research papers. Significantly in Year 2, 51% of these links were added in the last three days before the first feedback session (in the second week), and 52% of these in the last 3 hours before the feedback session.
There was only minimal evidence that 50% of the wikis met the “continuity and consolidation” criteria, 33% the “place for discussion criteria”, 50% the “improving how the group works” criteria, and there was no evidence that they were being used for student’s to apply their learning.

Discussion:
The wikis were predominantly used for posting useful URL links. These were frequently posted at the last minute before a feedback session which would not give opportunities for fellow students to use the sources in their learning.
There is an informal expectation by facilitators that students contribute at least once per case on the wiki but the contributions are not formally assessed. The last minute hurry to add resources, without regard to their type or quality, suggests a conformity to the expectations of the facilitator rather than an appreciation of the pedagogical value of a wiki. Formal assessment can be a motivator for students to make contributions (4). Currently the facilitator has minimal input into the wiki, but within Laurillard’s conversational framework (5), active facilitator involvement online is suggested to be essential for effective student learning.
The current wikis show “cooperation” between student but no collaboration (6) but when collaboration occurs that higher order skills are developed (7). These are the skills that students, specifically medical students, need to develop (8,9).
From this study there is potential for current thinking on the wiki use in PBL at Exeter to be developed to bring additional pedagogical value to the PBL groups. The wikis need to be valued as a key part of PBL offering a forum for collaborative skills to develop. The wiki use by students could be directly related to assessment to give motivation for use, guidance could be given to students on their use of wikis and training provided for the facilitator on how to monitor, motivate and assess the students on the wiki.

References:


3. Neve, H., no date. Why do we encourage students to use the wiki between PBL sessions? [online] Available at https://sites.google.com/a/exeter.ac.uk/pbl-facilitator-discussion-board/running-a-group [Accessed November 22, 2016]


Ref: 200, Wednesday 21st June, 4.40-5.00pm, Seminar Room 2
Does an online booking system improve student access to learning opportunities?
B Sharif, Y Ibrahim
Prince Charles Hospital

Background:
Students often have difficulty identifying learning experiences in hospital. A bespoke web-based booking system, Medboard[1], was developed to investigate the possibility of presenting students with an opportunity to sign up for upcoming teaching sessions that interest them. The purpose of this work was to determine if the use of the Medboard system could improve student access to learning opportunities within the hospital. Medboard was initially developed during, and was a prize winner at the NHS Hackday in Cardiff, 2015. It remains an open-source project.

Methodology:
A pilot study was carried out in Cwm Taf University Health Board at two district general hospitals. Participating students were in their 3rd year of medical school at Cardiff University. The Medboard system was populated with various session types. Students were given a brief presentation explaining the system. On sign up they selected a default hospital and placement type to enable the system to present them with learning opportunities most relevant to their current placement. Students were asked to select the teaching sessions most interesting and relevant to the current part of the curriculum they were following. On completion of the 3-month placement students were asked to complete a feedback questionnaire about their experiences.

Results:
The Medboard database offered students 2821 teaching sessions covering a 3-month period. A total of 81 students participated. Feedback surveys were returned by 21 students (26%). Medboard was accessed primarily through smartphones (62%). Of the respondents, 80% found the website worked well, 90% users found Medboard very easy or easy to use, 29% found it very helpful or helpful for finding sessions and 52% felt there was plenty of choice or enough choice of different sessions. Students found Medboard to be a user-friendly system with negative experiences consisting mainly of organisational and communication failures.

Discussion:
Medboard was developed to improve students’ access to learning opportunities in hospital. Although students found the platform useful, there were issues with poor communication which affected overall learning experience. Thus, there may be a role for a bespoke booking system for tracking individual sessions but greater input from medical teams is needed.

References:

Ref: 086, Wednesday 21st June, 5.00-5.20pm, Seminar Room 2
Smart phone quizzing: The future of Audience Participation Devices.
A Coombs, R, Rooney, J, Morgan
North Bristol NHS Trust

Background:
Audience participation devices (APDs) or ‘clickers’ have been shown to increase student participation, engagement and in some cases improve exam results (1,2). The APDs allow students to anonymously answer multiple-choice questions or provide feedback during the teaching session (3). Smart phone quiz technology is being used in pub quizzes across the country to increase audience participation and interactivity in the quiz. It requires a computer and a free app downloaded to a smart phone and works over any wifi network. The technology provides all the functions of the APD plus more features. The advantages are that it is done using the students’ smart phone rather then needing to provide any equipment. The student can answer questions using either a multiple-choice function, selecting the first letter of the answer on an alphabet grid or provide a numerical answer during a teaching session. There is also opportunity to agree or disagree with another student’s answer via the app to create discussion. Images or information can also be sent to the student’s phone meaning that it can be used without access to a large screen or a projector. The purpose of this study was to gain the opinions of 3rd medical students as to whether smart phone quiz technology improved their learning experience in small group tutorials.

Methodology:
13 third year medical students were given a shortness of breath tutorial; answering questions using the smart phone quiz technology throughout the tutorial using a variety of question types. Chest X-rays, spirometry results and ECGs were also sent to the students’ phones for their interpretation. The students had previously received tutorials on similar medical and surgical topics not using smart phones. The students were then asked to anonymously complete a questionnaire after the tutorial to provide feedback on the technology.

Results:
100% of students agreed or strongly agreed that the smart phone technology made the session more fun, with 92% agreeing or strongly agreeing that the session was more engaging. 76% of students felt that its use improved their learning compared to tutorials without the use of the technology, with the other students remaining neutral regarding this. 92% of student felt they would like more of this technology to be used in future tutorials and that the technology was easy to use.

Discussion:
Smart phone quizzing takes audience participant devices to the next level. The biggest advantage is that no special equipment is required as it utilises the students’ smart phones. It also allows more flexibility in answering questions compared to traditional APDs, which are often limited to multiple choice questions only, and allows images and data to be sent to the students so can be used without access to a projector or screen. The majority students gave positive feedback regarding its use in this tutorial. This technology could be further used in large group teaching such as lectures. APDs have been positively received in lecture settings (4). However with the smart phone technology no time would be wasted distributing or collecting clickers and there is no limit to the number of students that can participate providing they own a smart phone. A further study is planned to look at whether the use of this technology improves learning outcomes rather then only surveying students’ opinions. We plan to compare tutorials that use standard methods or that uses traditional APD devices, to that using the smart phone technology. Students will complete an exam pre and post the tutorials to establish any difference in learning and understanding. Praham et al (5), demonstrated improved knowledge retention using APDs and this is also an important area to investigate using the smart phone technology.

References:
Minds on the Move: the role of mobile devices in learning clinical medicine
A Wilson
Imperial College Healthcare NHS Trust

Background:
Use of mobile technology in the professional and personal lives of clinicians has increased. Medical students are no different, with mobile learning technologies seen to aid clinical education through timeliness and ease of use. Several UK medical schools have invested in providing mobile tablets for their students. Imperial College London has provided iPads to students since 2013. The aims of this study was to identify student perspectives on the iPad as it relates to their learning of clinical medicine at our institution.

Methodology:
Review of the literature identified several UK medical schools where mobile technologies have been integrated as learning adjuncts and the perceived benefits and challenges to student learning. A convenience sample of clinical medical students from Imperial College London was identified and paper questionnaires distributed. Free text responses providing qualitative data explored how students used the iPad and their views on its utility and limitations as a learning aid. Thematic analysis was applied to this data. The effect of specific perceived benefits and challenges of the iPad identified from the literature was evaluated and reported usage data provided quantitative values.

Results:
The literature review noted that both portability and timely use of mobile technology was its greatest asset in aiding clinical education but variable technological prowess and concerns over acceptability by clinicians and patients hindered wider uptake. 33 students completed our questionnaire with students from first to final clinical year represented. Only one student reported not using mobile technology in learning clinical medicine, with 85% (28 of 33) of respondents stating preference for the institution-provided iPad. 73% used the iPad at least ‘almost every day’. Portability and connectivity were most valued by students whilst several free text responses identified the volume capacity of the iPad as a welcome alternative to “100 pages of notes”. Patient and staff perceptions was a consideration that had at least some effect on the use of the iPad for 72% and 76% of students respectively.

Discussion:
Some of the perceived limitations (such as confidentiality and use of social media) noted in the literature were not present in our cohort, whilst students did emphasise the benefit of the iPad as a portable, easy-access alternative to traditional learning resources. The explicit emphasis on the large capacity of such technology is novel. Greater ambivalence and lower engagement with the iPad was found amongst senior students, who notably compared the use of the iPad in clinical environments with previous practices; junior students were not able to make such a comparison and reported overall fewer limitations of its use, suggesting a rapid shift in the culture of learning clinical medicine with increasing prevalence of mobile technologies.

References:

Ref: 296, Thursday 22nd June, 4.40-5.00pm, Seminar Room 2
Opportunities, constraints and Aha! moments: understanding students’ experiences of mobile technologies in the clinical workplace

N Lal, V Richards, J Martin, J Chopra, L Jackson, M Van Eker, D Alder & J Williams
University Of Bristol

Background:
Medical students are studying in an increasingly digital workplace where mobile devices are now common place in hospital and community environments. Studies have confirmed successful use of mobile technology as an adjunct to medical education. Mobile devices are a constant companion for many of us, yet little is documented on how mobile technologies support the everyday lives of medical students whilst working, studying and living on clinical placement. The purpose of this study was to explore just that.

We looked at the students’ experiences and specific uses of their mobile devices for supporting learning in the clinical workplace; what institutional, social and cultural factors supported, enhanced or constrained this; how institutions can better support students’ use of mobile learning and whether there was any change in learning behaviours and strategies over time.

Methodology:
Year 3 students from the University of Bristol’s medical school commencing their first year of clinical medicine at two NHS hospital trusts were invited to take part in the study; 28 students responded. Participants were given the choice of being provided with a device of their choice or using their own device. University ethics approval was granted and procedures followed throughout.

The methodology involves students acting as co-researchers in researching their own mobile and digital media practices. For a period of 10 months, data was collected from student recorded diary entries (180+ written and verbal), semi-structured interviews (16) and focus groups (3). All data was transcribed verbatim and analysed. Qualitative analyses of the transcripts were carried out inductively to identify emerging key themes and categories. A sub-set of the data was analysed by all co-researchers via which a coding framework and themes were established. The remaining data was analysed by 3 groups comprising one member of staff and one/two student(s). One researcher coded all of the data. The co-researchers met regularly in order to maintain dialogue, agree interpretations and analyse further adding new codes if necessary.

Results:
A number of key themes emerged including: immediacy and efficiency of access to learning resources to augment and consolidate real time learning; general acceptability of mobile devices within the clinical workplace and the feeling of trust between patients, practitioners and students; creation of new learning spaces and opportunities to exploit ‘down-time’; and the use of different Apps through peer and colleague recommendations. Students repeatedly stressed the importance of WiFi availability or ‘off-line’ Apps and the need to sync all work to one place in order for their mobile devices to work seamlessly with other devices such as their laptops. Collaboration between peers and teachers and teachers exploiting students using mobile devices was less well noted.

Discussion:
To date, the project has yielded a number of insightful learning points. Trust has always been at the core of medical practice and the same applies to the use of mobile devices. Gaining the support of patients and colleagues remains vital. Those students who reported using their mobile devices with confidence reported more change in their learning behaviour / strategies. Faculty development of staff and students in mobile learning practices and associated digital capabilities is an essential component for the successful embedding of mobile learning within curricula. Students as co-researchers increased validity, engaged them in meaningful research and allowed them to reflect back on their own practice.

Providing medical students the opportunity early in their career to explore mobile learning should enable a new cohort of doctors to thrive in a digital NHS. Educational institutions may gain insights into how best to design curricula to maximise the use of mobile learning. Further research is required to understand the untapped potential of mobile learning and identify the Aha! moments.

References:

Ref: 248, Thursday 22nd June, 5.00-5.20pm, Seminar Room 2
Designing a clinical app for a tertiary referral hospital: using feedback to get it right

F Mazzola, V Lewis, C Bishop, P Smith, J Scott
Plymouth Hospitals NHS Trust

Background:
Derriford Hospital is a tertiary hospital in Devon which is as the main referral centre in the South West for a number of specialties, including neurosurgery and cardiothoracic surgery. The idea for an app originated in the neuro and cardiac critical care units as trainees often had no previous experience working in these specialties. Although these departments were the main focus for the pilot, the app has already expanded to cover other areas of the hospital, including areas with varying different educational and reference needs such as radiology and microbiology. The purpose of the project was to design and pilot an app that fulfilled these goals by implementing a dynamic design method with constant feedback from multiple sources. The aims of the app are to 1) Improve access to local and external guidelines relevant to each department 2) Support staff moving across departments with practical advice 3) Provide educational support and inspiration for a range of experience.

Methodology:
The initial prototype for the app was a Microsoft OneNote workbook for our Neuro Intensive Care Unit (ICU) where we collated guidelines, key scenarios, important papers and other educational content that was then made available to Neuro ICU trainees. Feedback from this stage was gained via a paper form distributed to trainees who had been issued log in details. The development of the app came after connecting with the Agile Development team via an Innovation Breakfast held at Derriford Hospital. After the initial design, feedback was gathered in both subjective and objective ways: stakeholder meetings involving key clinical staff across a number of specialties, regular communication between the design clinician and the agile development team and a SurveyMonkey survey completed by those enrolled in the app pilot programme.

Results:
Paper feedback from the OneNote prototype highlighted that trainees felt under confident when starting Neuro ICU and were keen to use their smart phones to access medical information. They predominantly used the notebook to access local guidelines and further their education. Comments from stakeholder meetings over 12 months included; concerns voiced about who would claim responsibility for the content for each department, how content would be kept up to date, issues with how much storage space on a personal device it would use and ease of downloading and accessing content. The SurveyMonkey survey was completed by 9 of the 12 people enrolled in the pilot. 5 of the 9 found it difficult to download using the pilot bring your own device (BYOD) scheme. Otherwise, feedback was overwhelmingly positive with the design described as ‘easy to navigate’ ‘clear’ and ‘easy to read’.

Discussion:
The feedback we gathered highlighted the importance of seeking regular and structured feedback from a number of sources as it helped guide and refine the app prior to full launch. With this feedback, we have proactively tackled issues associated with downloading and issues surrounding ownership of content. We identified the following factors as key to implementing a successful hospital run app; Firstly, early identification of key stakeholders and input from them was essential to creating a firm foundation in the hospital management system before further growth. It also gave reassurance to departments approached later in the pilot phase. Trainee feedback enabled us to tailor the content to topics that were relevant and useful. In conclusion, feedback received from multiple sources has been essential to creating a relevant, well designed and progressive app which we believe will engender confidence, improve education and inspire innovation for departments in Derriford Hospital.

Ref: 335, Thursday 22nd June, 5.20-5.40pm, Seminar Room 2
Immersive Virtual Reality: an effective, low-cost educational tool with vast potential
A Magnussen, C Wiles, A McGregor
Imperial College NHS Healthcare Trust

Background:
Simulation is a current buzz-word in medical education and the many current technologies that have been developed to further this learning approach are high fidelity and diverse. However such equipment often comes with a significant associated set up and running cost. The technology itself is expensive as are the required simulations suites and staffing. Another potential barrier to effective learning with such approaches is lack of immersion, which can limit training transfer.

Forms of virtual reality (VR) have been around for over two decades, but in the last couple of years the sustained investment from the commercial gaming market has made such technologies readily accessible to non-specialist commercial users. With the advent of smartphones and the invention of the smartphone headset the public has access to wide variety of VR experiences in their living rooms from virtual rollercoasters to 360° video games. The gyroscope built into modern smartphones allows the user to look around a completely spherical field of view as if they were actually there. The VR experience is recognised for its immersion and we undertook a pilot study to investigate whether this technology has reached a point at which it can be adapted to create cheap, valid learning tools for undergraduate medical education.

Methodology:
To identify existing areas with scope for improvement in the learning experience, we invited undergraduate students on the MB BS program at Imperial College London to focus groups to explore areas of the undergraduate curriculum that are difficult to teach using didactic methods. From this shortlist, we selected the area of challenges around the introduction to the operating theatre, which coincides with our educational setting of undergraduate surgical training.

To assess whether a learning tool employing VR technology could potentially be used to better prepare students for the operating theatre, we produced two short scenarios in the operating theatre (X and Y), using a commercially available budget video camera capable of capturing immersive “equirectangular” footage with a 360° field of view. 20 students were then asked to rate the experience of viewing these scenarios using smartphone headsets using Likert scales and semi-structured questioning.

Results:
Feedback was universally positive from all students. 100% agreed that it was a useful educational experience and over 90% strongly agreed that it was more valuable than watching a standard video demonstration. Despite the relative low fidelity of the hardware and software very few students experienced motion sickness or thought that the footage was too blurry. The majority felt that they were completely immersed in the experience and that this added significant value to the exercise.

Discussion:
This pilot study has shown that immersive VR scenarios are relatively cheap and easy to produce and disperse. Our feedback has shown that medical students are willing to engage with this technology and that it has significant potential to be a valuable learning tool.

References:
Technology Enhanced Learning (TEL): Developing novel online virtual cases to supplement the medical student clinical learning experience
J Gilmour-White, M Morgan, D Morley, D Price, K Saar, M Croft
University of Birmingham

Background:
Fourth year medical students at the University of Birmingham spend the year on placement rotations in medical, surgical and neuroscience specialties. Paper based virtual cases (VC) have been used to supplement students’ experiential learning from their placements as examples of key clinical presentations with self-directed learning (SDL) questions on investigation and management. Feedback from students highlighted problems with a lack of feedback and interactivity that limited their utility. We exploited the educational advantages of accessibility and novel interactivity offered by Articulate software Storyline 2 to develop interactive e-learning course material to address these issues (1).

Methodology:
This was an iterative process of creation, evaluation and revision (2), stimulated by educational specialist, Clinical Academic Lead, Technology Enhanced Learning (TEL) team, Clinical Teaching Fellow (CTF) and student focus group review. E-learning VCs were content checked by the relevant specialty lead prior to publishing on the University’s Virtual Learning Environment (CANVAS). A contact email address was included within VCs to encourage students to provide feedback for the TEL team that should facilitate an ongoing process of revision.

Results:
Initial discussions between Academic staff, the TEL team and students identified key functions to be included in the VCs including usability, interactivity and immediate feedback on answers. Academic staff ensured that students are first required to complete SDL questions before reviewing automated feedback. They are then encouraged to reflect through the opportunity to amend their initial responses and identify areas where additional learning is needed. This novel development in the VCs is designed to promote deep learning and reflective practice. After completing VCs, students are able to print out a copy of their revised answers as a basis for discussion with their academic tutors and to keep for future reference. Links and embedded files have been added to direct students to useful learning resources, whilst interactive devices such as: multiple choice, multiple true/false, drag and drop and hotspot links, have maximised interactivity.

Discussion:
Constructing interactive VCs has been a learning experience for the team. The challenges the team faced included: taking student opinions into account, communication between the TEL and clinical team, and the technological limitations of Storyline 2. These challenges were overcome by working collaboratively and proactively with all stakeholders as well as improving communication between them. Engaging academic staff, technologists and students in an iterative development process has resulted in the development of e-learning resources with novel features designed to promote SDL, reflective practice and deep learning while meeting the students’ requirements for usability and interactivity. Sharing this process will help other educational institutions tackle similar endeavours effectively.

References:

Ref: 311, Friday 23rd June, 9.20-9.40am, Seminar Room 2
Developing immersive video based virtual patients to support effective consultation skills
A Manley
University of Bristol

Background:
Video has been used for decades to support consultation skill development, with student activity when viewing the material being key to effectiveness (1). Increasing internet connectivity makes interactive online video-based resources increasingly popular. Use of virtual patients can improve knowledge and reasoning skills, with students favouring menu-driven virtual patients with pre-recorded speech which offer feedback on performance (2, 3). However developing sufficiently realistic virtual patient cases to support history taking and communication skill development can be costly and require technical skills (4). Existing software allowing branching virtual patient designs still limit the user in terms of how they can navigate the material.

During this presentation I will present a freely available piece of software to develop a video-based virtual patient which we have used to develop a learning object aiming to enhance students’ consultation skills related to self-harm assessment. This only requires an ability to use a spreadsheet to ‘programme’ the scenario and offers the user thousands of ways to navigate the material, giving it greater fidelity to clinical practice. It would be of interest to others who wish to create engaging consultation-based online learning experiences for students.

Methodology:
We developed a script, which we video recorded with actors and coded according to the feedback we wished to offer students e.g. tagging appropriate questions. On the spreadsheet we inputted this information, and ranked which further videos each clip could link to. This enabled users to navigate the case material in a greater variety of ways than a standard branching virtual patient design. We uploaded and ran the virtual patient online to conduct usability testing.

Results:
The result is a video based virtual patient which is well aligned to Harden and Laidlaw’s (5) FAIR principles, allowing students to actively engage in an individualised learning experience, directly relevant to their clinical work which offers immediate feedback on their performance.

The student using the virtual patient is presented with a video of a patient attending hospital and is asked to take a history by selecting questions from one of three options. The patient briefly responds to the students’ actions and further options are provided as to what to ask or do next. Students can perform actions in any sequence and return to previous topics in the light of the clinical information they have gained as they would do in clinical practice. The video clips link well so the virtual patient appears as a single video responding to the students various actions by answering questions, displaying different emotional responses etc. On ending the clinical encounter the student receives feedback (elements of the history covered, communication skills e.g. use of open/closed questions, time taken) and a personalised plan for improvement.

Discussion:
I will demonstrate the virtual patient, discussing benefits including the fidelity to clinical practice, modelling of consultation skills and attitudes, opportunity to apply clinical reasoning and provision of feedback, as well as limitations including the development time and that students select from options rather than using their own words. I will present my experience as a clinician using this software to develop the virtual patient scenario, relating this to the ADDDEM stages of reusable object design (6) and describing lessons learnt to enable others to avoid pitfalls should they wish to develop a similar case. I will highlight future directions including an initiative to collaborate with medical students to create their own virtual patients using this approach which we are running this summer. I would welcome discussion around the potential utility of this approach and ways in which it could be improved.

References:

Ref: 510, Friday 23rd June, 9.40-10.00am, Seminar Room 2
**A novel method for teaching undergraduate trauma radiograph interpretation**
G Brown, M Arsanious
NHS Lothian/University of Edinburgh

**Background:**
Undergraduate students often experience difficulty in the interpretation and communication of trauma radiographs, relating to orthopaedic injuries. Traditional methods of interpretation have focused on pattern recognition of injuries. This study proposed that encouraging a higher level of knowledge about fracture patterns by drawing the injuries following verbal description would increase the students educational yield from teaching sessions.

**Methodology:**
A cohort of undergraduate students were taught using a flipped classroom tutorial and small group interpretation of plain radiographs of the wrist, hip and ankle.
A second cohort was taught using a flipped classroom tutorial which incorporated the new method. This involved splitting students into pairs where one had a tablet computer with the same series of radiographs as the first cohort, and the other student had a tablet computer equipped with an audience response application that allowed submission of drawings. The first student interpreted the radiograph and described it to the second, who then attempted to draw the radiograph. The verbal description was noted and the drawings from each group were anonymously analysed with the whole tutorial group, using the interactive whiteboard. Each cohort was given a brief radiograph quiz prior to the tutorial, followed by 2 further quizzes at the end of the tutorial and at 6 weeks after.

**Results:**
Students from both cohorts showed improvements in quiz scores at the end of the tutorials but the cohort with novel methods showed improved scores at 6 weeks, suggesting better understanding and knowledge retention.

**Discussion:**
This study demonstrates a novel method of teaching trauma radiograph interpretation to undergraduate students.

*Ref: 458, Friday 23rd June, 10.00-10.20, Seminar Room 2*
The SETS course: using in-situ simulation in care homes
T Moffatt, N Broomhead
East Surrey Hospital

Background:
Admissions to hospitals are increasing year on year and hospitals are struggling to manage. Over ¼ of a million people live in care homes; they are often the oldest and most frail in our population. On occasions patients are moved from their care home into the acute hospital. The CQC has recommended that hospitals and care homes improve communication. The SETS (SBAR Education through Technology and Simulation) course aims to embed the use of SBAR communication in care homes with the aim of reducing the number of admissions to hospital by getting the ‘right’ information to the ‘right’ person. Technology Enhanced Learning (TEL) was employed in 3 ways in this course: E-learning, simulation and podcasts. In-situ simulation training in care homes has not been reported previously.

Methodology:
Staff from 38 care homes in Surrey and West Sussex were recruited over 1 year (n=200). A portable simulation ‘lab’ was taken to the care home setting and in situ sessions were run - after participants had completed the SBAR e-learning course. Two rooms are used: a large room for discussion and observation, and a separate smaller room for simulation. 4 scenarios (with 4 common clinical situations) were developed using an actor and run with care home staff. Each scenario had an ‘easy’ or ‘hard’ route; all ended with a piece of SBAR communication. Following the scenario a structured feedback session (using the ‘teamGAINS’ model) is facilitated by the faculty (exploring the simulation situation in detail and also the SBAR communication options). Data from 170 participant feedback forms was analysed.

Results:
Using a Likert scale (0=no knowledge, 5 =expert) knowledge of SBAR communication increased from 2.08 to 3.53 (P of 4.78 (0-5 scale). Thematic analysis of the narrative feedback shows that the discussion and participation in the simulations themselves were the most valued sections. Participants felt the sessions were: ‘informative’, ‘stimulating’, ‘helpful’ and ‘interesting’.

Discussion:
Technology Enhanced Learning is well received by care home staff and in-situ simulation is effective in the care home setting. Recruitment took time, and finding the right people in each organisation is imperative for engagement. The portable equipment needs to be easy to set up and adaptable to a number of environments. The model can then easily be replicated to train large numbers of staff. A further longitudinal study is needed to determine how SBAR learning has influenced practice and whether this has impacted on admissions to hospital.

Ref: 436, Friday 23rd June, 10.20-10.40am, Seminar Room 2
EDC Educator Innovator Award Winner 2016
Takeaway Body Parts
C F Smith
Brighton and Sussex Medical School

Background and Purpose
Errors in medicine are on the rise\(^1\). The expansion of knowledge means that junior doctors have much more to learn. Learning anatomy is essential and dissection of donors is the gold standard. However, donor levels do not meet current demand and digital learning lacks the 3D experience\(^2\).

Methodology
Brighton and Sussex Medical School has created a takeaway menu of 3D body parts printed on a 3D printer from a CT dataset of a donor that medical students can takeaway after their dissection sessions to continue their learning. Focus groups with medical students (n=15) assessed students experiences and an a randomized controlled trial (RCT) sought to assess any differences in learning outcomes. Ethical approval was obtained for this study.

Results
To assess the impact on medical student learning focus groups yielded six key themes: model properties, teaching integration, resource integration, assessment, clinical imaging, and pathology and anatomical variation. The RCT shown a rise in student retention when 3D prints were used (p=0.0006).To date over 300 body parts have been printed. An average price per print is £2.50.

Discussion and Conclusion
Learning anatomy is a multimodal subject and dissection of donors is a powerful and vital experience, the 3D prints really allowed students to continue their learning in a physical way after the timetabled sessions and helped students to apply their learning better to patients. 3D-printed anatomical models can be successfully produced from the CT data set of a deceased donor\(^3\). These models can be used in anatomy education as a teaching tool in their own right, as well as a method for augmenting the curriculum and complementing established learning modalities, such as dissection-based teaching. 3D printing from donor cadavers offers an additional resource of high educational value to students, yet it remains to be proven to provide high quality education on its own.

References

Thursday 22\(^{nd}\) June, Intra-conference session Seminar Room 12, 2.45-3.45pm
EDC Educator Innovator Award Winner 2016
If story telling is central to human meaning, why, in the research world, is there not more storytelling?
L Delgaty, Newcastle

Background to Innovation
Like many MScs, in the Masters of Medical Education programme at Newcastle University, students are expected to design and deliver a small scale social science research project. Although the jump to autonomous research can be difficult (Farrant, 2014), upon completion, students should be competent in conducting basic research. They are required to have the knowledge of research principles and the skills for independent research, yet, students often struggle with this and see research as a frightening and mysterious activity conducted only by academics (McCarthy, 2015). The awareness of the explicit research end product is not difficult. There is a clear, physical outcome- the dissertation. The difficulty lies in hidden and secret (Farrant, 2014) research process. The complexity can be difficult for students to understand, for supervisors to articulate and has been called a ‘concealed journey’ (Ferrance, 2000). The conceptualisation of research as a journey is longstanding. Students begin their journey with a naïve interest in a topic and construct knowledge about the research process itself, over time (Mackenzie and Ling, 2009). This tacit, or practical research knowledge lies below the surface and is traditionally accumulated only through experience and learning by doing (Mlambo, 2014). As an academic and research supervisor, I recognised the experiences the students had of the research journey itself were invaluable (Farrant, 2014). However, once students completed their dissertation, this knowledge was lost and not accessible to others. The challenge for me was how to capture and ‘teach’ this tacit knowledge or practical intelligence, acquired through the research experience itself. I realised one way of doing this was for past students to share stories which can help make meaning of the research journey for others.

Problem to Solve
Along the research journey, our students, like others on similar programmes, submit small pieces of work as milestones of progress and academics provide feedback on this work. Although we hold this all electronically, current students only have access to select parts of this past work and there is no narrative or cohesion. For example, students can come in and look at past research proposals or physical copies of submitted dissertations. These, however are only atomistic parts of past research products, in isolation. I knew that both the overall student experiences, changes in direction, struggles, solutions etc. combined with past academic guidance given were not accessible and therefore, lost. We hold these valuable resources, and recognized if I could organise, collate and present them to students, I could help demonstrate the evolution and complexity of the research process. However, I was also fully aware that lack of time is the leading barrier to development of resources for academics (Walker, 2016). I began to investigate digital storytelling, which links the age old concept of storytelling to technology by combining the idea of telling stories with a variety of multimedia tools. Digital stories are not new and have been used widely to share material, subjects, topics and content. I realised they have tremendous potential (Robin, 2008), but have been almost totally overlooked as a platform for fostering and transferring embedded and tacit knowledge (Ambrosini and Bowman, 2001; Mlambo, 2014).

Teaching Innovation
Therefore, in an effort to make the tacit research process explicit, I created research digistories (RDS) as online educational resources for current students. They are organised, step by step examples, using past student milestones submitted with academic feedback already given along with a central narrative. These multimedia stories were created using existing, archived materials. The example below was created by the academic; the template is now developed and is being populated by an administrator.

Methods
The digital storytelling software ‘Sway’ was used, which enables users to create and share interactive reports or presentations and is fully editable. As a commercial product, it is user friendly, basic and similar to PPT in use. It is accessible on desktop and mobile devices and most importantly, is fully integrated with all Office 365 applications, the most common productivity software in the UK.

I held a focus group including students and research supervisors to decide a final template. Then, with past student permission, archived work and past academic feedback was collated, organised and draft RDS were created. These were exported to the individual students, who were asked to review their entire research journeys and create a short reflective narrative. These narratives were added to the final RDS to create a coherent account of each student’s experience. These RDS are not anonymous. Past students, proud of their accomplishments asked that their name be included. This corresponds to literature, suggesting sharing RDS is a way to publicise work and fosters social learning amongst peers (Mlambo, 2014). One copy of the RDS was sent to past students for their own...
dissemination, corresponding to my personal and institutional aim of facilitating students to share and present their research. Another copy, including the final narrative, was uploaded as a resource in our password protected learning environment for current students and supervisors.

Evidence/Impact
Both quantitative (web analytics) and qualitative data have been collected to evidence the impact on different stakeholders: current and past students, supervisors and the institution. With over 300 direct hits (cohort of 20 students), current student feedback includes: ‘Seeing the process itself was so incredibly valuable, I go back to them again and again’ and ‘Spent hours looking at these...made me realise how complex/non-linear the research process is.’ Past students have begun using the RDS we created as content for their own conference presentations. Supervisor feedback inculdes ‘What a great use of academic time and student work. A wonderful, explicit resource that has been staring us in the face!’ Institutionally, this template, has already been shared with other Masters programmes (both internal and external to this University). Furthermore, I have been asked to host a University level training workshop for academics, using these RDS as examples.

Conclusion
This teaching innovation responds to student need, a gap in current published practice and academic pressures. It is editable and the RDS can be created by administrators, saving valuable academic time. Most importantly there is clear evidence, this easily transferable and sustainable innovation is helping academics unveil, and students make sense of, the hidden and implicit research process.

References
Lewis, P.J. (2011) 'Storytelling as research/research as storytelling', Qualitative Inquiry, 17(6), pp. 505-510.

Thursday 22nd June, Intra-conference session Seminar Room 12, 2.45-3.45pm
Trainee perceptions of what makes a good clinical placement: a Q-sort analysis
AD Bullock, C Callendar C Dumangane, E Muddiman, J MacDonald, L Allery and S Phillips
Cardiff University

Background:
The quality of the clinical placements is a key factor in the recruitment and retention of trainee doctors (1, 2). Despite General Medical Council (GMC) standards for medical education and training (3), the quality of training posts varies as is demonstrated by the development and application of tools such as PHEEM (the postgraduate hospital educational environment measure (4), JEST (Job Evaluation Survey Tool) (5) and revealed in results of the GMC national training surveys. The aim of this study was to explore systematically the views of trainees on what makes a good clinical placement.

Methodology:
To assess trainees’ priorities, a long list of statements was derived from the literature and agreed in discussion with trainees and Deanery staff as being possible responses to the question ‘what are the things that you value most about your clinical placements?’. This list was shortened to 41 statements which were ranked from least important to most important by a sample of trainees from both Foundation Year 2 (F2; n=31) and subsequent core medical training (CMT; n=45). The ranking was conducted as part of a Q-sort exercise, thereby allowing a data reduction technique (principal components analysis) to be employed to identify any shared and distinct perspectives amongst the trainees (6). Participants also completed a post-sort questionnaire which aided interpretation of groups found. Analysis was conducted separately for each group of trainees and the results compared.

Results:
Two distinct groups were revealed within both the F2 and CMT data, with very similar patterns found in the two samples. These groups displayed distinct perspectives, with differing priorities. One group valued convenience, organisation and safety. Individuals within this group emphasised the importance of a good work-life balance. They were concerned with their own well-being as well as the safety of patients, and appropriate staffing levels were highly regarded. The other group placed higher value on reputation and the quality of supervision and training. Those in this group demonstrated an awareness of their junior position, along with a desire to develop their professional capabilities. They were particularly keen to work with supervisors who demonstrated up-to-date, evidenced-based practice.

Amongst F2s, significantly more female trainees associated with the organisation and convenience group, whilst more males fell into the quality of supervision and training group. Interestingly, those with family commitments emphasised supervision and training across both cohorts, rather than convenience.

Across both groups and samples, a supportive supervision team was valued above all other aspects. Conversely, provision of accommodation was considered to be one of the least important aspects. Between the cohorts, a larger proportion of the CMTs associated with the supervision and training perspective than did the F2s.

Discussion:
The Q-sort analysis provides a valuable insight into trainees’ thinking about what is important in a clinical placement. It is perhaps unsurprising that overall trainees regarded the quality of the supervision team to be the most important aspect of their placement. However, the relative importance given to other aspects of training between the two groups is worthy of consideration. Differences between the two samples suggests that CMTs tend to focus more on, and prioritise, their developmental needs than the F2s. The findings have implications for how to convey effectively information about clinical placements to trainees at different stages. Findings also warn against making simple assumptions about the perspectives of those with family commitments.

References:
3. GMC. Promoting excellence: standards for medical education and training. 2015. GMC, Manchester
4. Vieira JE. The postgraduate hospital educational environment measure (PHEEM) questionnaire identifies quality of instruction as key factor predicting academic achievement. Clinics 63:741-746

Thursday 22nd June Intra-conference Session Seminar Rm 12, 2.45-3.45pm (Ref: 330)
Patient involvement and public engagement in UK medical education - a qualitative case-based study
A Berlin
UCL

Background:
The practitioner research presented tells is the story of what happens when we take an important, but heterogeneous idea - patient involvement and public engagement in medical education- and turn it into a mandatory standard. It explores how public engagement and patient involvement has been framed and enacted in UK medicals in the light of revised standards published in Tomorrows Doctors,( GMC 2009) . The focus is on how medical school leaders and officers of the regulator, frame their policies and practices in response to a growing perception that the public should be more actively engaged in health, healthcare, and higher education. These developments unfolds in the context of increased pluralism in the academy and public services, alongside tighter regulation.

Methodology:
Four case studies are presented - three medical schools with different missions, and the regulator. Interview transcripts with school leaders and GMC officers were analysed applying two approaches, informed by symbolic interactionism and social epistemology: boundary object theory and frame analysis. Conceptualising public engagement as a boundary object facilitated an analysis of the transition of an educational practice - at the interface between academy, profession and public - from innovation, to common practice, to institutionalisation. Frames are used by individuals, organisations and social groups to communicate on predetermined ideas. Framing defines issues or problems, assigns responsibility, makes moral judgements and suggests remedies(Cornelissen and Werner, 2014)
Through frame analysis, the case studies provide an insight into the socio-political, moral and pedagogical dimensions of involving patients and the public in medical education how these are affected by the use of knowledge, values and authority on one hand, and regulation on the other.

Results:
The study shows that public engagement is a diffuse, plastic concept acting at organisational and individual levels with many features of a boundary object (Star, 1989). This conclusion is further supported by its institutionalisation as a regulatory standard (in Tomorrow’s Doctors 2009). The wide range of frames identified highlights both the plasticity of the key concept, public engagement in medical education, at micro level, as well as the processes and effects of regulatory standards at individual, school and regulatory levels. This study sheds light on ideas of professional and organisational identity formation and on boundary agents - those working across intra, and extra organisational boundaries. These porous boundaries exist became school and community on the one hand and regulator on the other.
Strengths and weaknesses of this approach will also be considered.

Discussion:
Medical school leaders frame public engagement and patient involvement with reference to their local higher education and healthcare context, and their knowledge community. Framing tends towards either individual, person-centred, or collective, socially accountable orientations. Both raise issues of epistemic justice - between individuals or institutions and civil society. Voluntary and regulatory standards for medical education are evolving - reframing professional and regulatory priorities. This study helps us understand how such standards in professional education progress and provides a framework for investigating and analyzing their intended and untoward effects at individual, organisational and institutional levels. The findings will be of interest to curriculum leaders, practitioners, lay people and researchers specialty those seeking greater public engagement, as well as national regulators and international organisations promoting educational quality.

References:

Thursday 22nd June Intra-conference Session Seminar Rm 12, 2.45-3.45pm (Ref: 480)
"Why not you?": Discourses of widening access on UK medical school websites
K Alexander (1), J Cleland (1), T Fahey Palma (1), S Nicholson (2)
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In UK medical education, widening access (WA) activities and policy are focused on the recruitment and admission of a representative percentage of students from lower socioeconomic backgrounds. However, very low application rates from these groups persist despite significant investments of time and resources in WA by UK medical schools. A situation where stasis is reached, despite continuing efforts for change, necessitates a step-change in approach. Currently there are two main arguments for WA to medicine: to facilitate social mobility and to diversify the workforce for improved service provision. However, little is known about how UK medical schools are using these arguments to attract or inform prospective applicants in lower socioeconomic groups, or how effectively this is done.

Our objectives were to investigate how the value of WA is communicated by UK medical schools through their WA webpages, and to examine how this may create expectations regarding who is ‘suitable’ for medicine.

To achieve these aims, we used a critical discourse analysis (CDA) approach and utilized an adapted version of Hyatt’s analytical framework. This allowed us to investigate the values and power structures underpinning medical schools’ presentations of WA, and to question whether their core messages might be embedding or further reinforcing marginalization, rather than combating it. We first identified drivers, levers and warrants for WA before undertaking a systematic investigation of the language used to reveal the discourses and their underlying values.

Analysis was underpinned by a Foucauldian understanding of discourse. From this perspective discourses are the taken for granted ‘rules’ that enable and constrain a group’s way of thinking, and influence what is considered valuable or legitimate. CDA aims to expose, examine and challenge these ‘rules’ and the values they perpetuate, especially if they may be creating or reproducing inequalities. A Foucauldian approach can also expose the implications discourses have for the way people think, feel and act through an exploration of subject positions.

Subject positions made available in the texts can therefore reveal assumptions about the behaviour and attitudes considered most suitable for WA applicants.

CDA and Foucauldian approaches are becoming more frequently used within medical education. This study contributes a novel analytical design to these approaches, focuses on underused aspects of theory and brings previously unexamined concepts into focus. Moreover, webpages are an uncommon data source, although over 90% of students use university websites to inform a decision about where to apply.

Findings revealed that the discourse of ‘WA for social mobility’ was strongly dominant. This presented WA as an initiative to support individuals with academic ability and commitment to medicine, but who were disadvantaged in the application process by their background. Within this discourse, WA applicants were positioned as the sole beneficiaries of WA.

Discourses of ‘WA for workforce improvement’ were marginalized and largely excluded. Alternative strengths typically attributed to students from lower socioeconomic groups (e.g. improved understandings of underserved populations, resilience) were not mentioned, creating the implication that these were not valued, nor seen as a benefit of WA.

The prioritization of WA as a tool for individual social mobility is not unexpected given the UK’s current neoliberal approach to higher education, however, the almost total dominance of this discourse over that of WA for the improvement of service provision is surprising, especially given the increasing presence of this argument internationally. This study thus indicates the extent of the imbalance between these discourses in the UK.

The dominant discourse legitimized certain traits as suitable for medicine (e.g. academic excellence and commitment to the subject), and silenced others (e.g. varied perspectives, resilience). These expectations may act as a barrier to WA, as they reinforce that ‘non-traditional’ applicants may be at a disadvantage within a system that foregrounds more traditional attributes and does not appear to value the inclusion of those with alternative strengths.
Overall, findings contribute clarity to an important area in which progress has been slow, and lend strength to calls for a wider definition of ‘merit’ within medical school selection. This study encourages medical schools to reflect on their discourses, critically evaluate ‘taken for granted’ approaches to WA recruitment, and consider suggestions for positive change.

A paper from this work is currently in press in *Medical Education* and is available upon request.

**References**


*BORPA, Intra-conference session Thursday 22nd June 2017 11am – 1pm, Alumni Auditorium*
Patient perspectives on how to better teach and evaluate diversity education in medical and healthcare institutions: “Knowing one’s ‘self’ is the key to knowing others”

RE George, M O’Reilly and N Dogra

RE George, PhD Researcher, Department of Psychology, Neuroscience and Behaviour, School of Medicine, University of Leicester.

Background and Purpose

The General Medical Council (GMC) Tomorrow’s Doctors emphasises the inclusion of diversity training in medical undergraduate education and within the NHS Equality & Diversity training is mandatory for all healthcare professionals. Despite the frequent inclusion of the term ‘diversity’ in educational policy and healthcare, ambiguity remains in its usage. This lack of consensus applies not only for the definition but also for the development, delivery and evaluation of the training. Consequently medical schools in the UK interpret GMC guidance in different ways resulting in very variable content and delivery. With the deficiency of validated evaluation tools available to measure the effectiveness of diversity training, it is unclear whether the impact of the training is known or even being measured.

An increasing emphasis is placed on ensuring health professional training is reflective of patient needs and concerns. Yet, there is limited research to suggest how patient perspectives have been incorporated into current diversity training. This study aimed to gather the perspectives of mental-health patients around how to better teach and evaluate diversity training.

Methodology

A participatory research approach was adopted throughout the study, this method involved using a range of techniques designed to actively involve those individuals whose experiences and perspectives are being investigated. This approach was used because it offered a flexible method and evidence has shown it maximises the involvement of patients in exploring different aspects relating to curriculum development and design.

A series of participatory workshops were conducted in collaboration with five mental-health patient organisations. Three patient participatory workshops were conducted with a total of 42 participants and were designed to obtain specific answers to the study aims through discussion around four tasks. These involved gaining their perspectives around how they understood key terminology in relation to diversity education, their expectations of the knowledge, skills and attitudes they anticipated from ‘culturally competent’ practitioners, their views on current diversity education and how to improve it and their ideas around how to effectively evaluate the training.

Given the complexity and nuanced nature of diversity training, participatory workshops offered an innovative method to capture the complexity of diversity issues in a supportive environment and also enabled potential solutions to be discussed. Template analysis with principles of thematic analysis were used to analyse the data and identify themes.

Findings

Three over-arching themes emerged from the data; conceptual clarity of key terminology, relationship-centered care and improvements around diversity training. The findings revealed that diversity education should be focused on the nuances and dynamics of clinical relationships, where the influence of both the patient and the professional are acknowledged and explored. In particular the relationship considered the most important to examine with respect to diversity education was the ‘practitioner-self’ relationship. This requires health professionals to explore, unpack and reflect upon the meaning of diversity on an individual level and in relation to colleagues, peers and patients, to facilitate an appreciation and value for diversity in others. A reconstructed theoretical framework around ‘relationship-centered care’ was developed, outlining the new dimension of the ‘practitioner-self’ relationship.

Discussion and Conclusion

The findings conveyed the heterogeneity of understanding of the terms ‘culture’, ‘diversity’ and ‘cultural competence’, but there was consistency in what was expected of professionals who are competent to provide care for diverse patient needs. Patients contradicted that isolated increases in cultural knowledge and sensitivity without consequent change in a professional’s attitude and how they relate to different patients is of questionable value when trying to improve the way professionals acknowledge and respond to diversity. The findings of this study
indicate that patients argue that diversity education should not focus on gaining knowledge about different cultural groups but on the fundamental principles of care and compassion and the significance of meaningful relationships, where differences between the patient and professional are valued, acknowledged and acted upon.

The findings provided clarity around how diversity education can be better theoretically informed and evaluated. Framing diversity teaching around ‘relationships’ with the ‘practitioner-self’ relationship at the centre holds promise for a theoretical model that could integrate diversity education throughout the medical and healthcare curriculum.

References

BORPA, Intra-conference session Thursday 22nd June 2017 11am – 1pm, Alumni Auditorium
Medical Aspirations, Parenthood and Work-Life Balance: Experiences of Doctors in Training
C Leitner 1, MC McNeill 2, AJ Allan 3 & K Mattick 3
1 Medical School, University of Exeter, England, 2 Royal Devon & Exeter Hospital, England, 3 Centre for Research in Professional Learning, Graduate School of Education, University of Exeter, England

Introduction
Junior doctors in the UK report that conflicts between their personal and professional life create a significant source of stress in the initial years post qualification. The culture and duration of medical training poses challenges for both women and men, particularly when it comes to combining leisure pursuits, parenthood, other caring roles, career advancement and/or involvement in teaching or research.

Parenting introduces particular challenges. Doctors have fewer children and tend to have them six years later than the national average. There is an increasing number of female doctors in the UK. Although their distribution across specialties varies, they are underrepresented at the consultant grade, perhaps suggesting that these senior roles and motherhood are a challenging combination.

With fewer trainees progressing directly into UK training posts after the Foundation Programme and a shortage of GPs, it is important to research career decision-making in order to provide flexible working arrangements that enable medicine and parenthood to be combined. Much of the work to date has been survey-based. There is little qualitative research exploring attitudes towards work-life balance and parenthood in UK medical students or junior doctors and how this interacts with specialty choice, which will enable exploration of contextual factors and interactions in detail. Therefore, in this study, we explored the experiences and beliefs that influenced decisions about work-life balance, timing of parenthood and specialty choice in senior medical students and foundation doctors, including perceptions of the support available and workplace culture. The research question is: What are senior medical students’ and foundation year doctors’ perceptions and experiences of planning for a medical career and parenthood?

Methodology
The research was undertaken as an interpretive and collective case study of the perceptions and experiences of approximately 25 fifth year medical students and Foundation Doctors in South West England, in relation to planning for a medical career and parenthood. These participant groups were selected since they are making important career choices over key transitions (starting work as a Foundation Doctor and then choosing a specialty). A purposive sampling method was utilised to maximise variation. A semi-structured interview was the main data collection method (approximately 60 minutes), using open-ended questions, prompts and probes. The interview schedule covered the key themes (e.g. career planning, timing, parenting and childcare, support) but was flexible so that the participants could share their own thoughts and feelings. A Life Grid was used to encourage a focus on personal and professional trajectories two, five and ten years into the future. Interviews were audio-recorded and transcribed verbatim. Data were thematically analysed using a constant comparative method. This process involved two levels of data coding: initial open coding and inferential coding.

Findings
Three main themes were identified within the qualitative data. The first theme related to the current workplace experiences of the individual and their perceptions of working conditions whilst on placement (medical students) or in their daily work (Foundation Doctors). Descriptions included detailed insights into workplace culture and the structure of work, for example rota allocations for out of hours work.

The second theme related to future career planning and considerations affecting specialty choice. These included description of factors that informed their decision making process through personal experiences of clinical care, identification of role models, perception of different specialties and their training programs, and the implications for work-life balance. Interestingly, participants described intricate alignment of multiple aspects in their planning, including family and partner considerations such as parenthood, leisure and sporting activities, geographical location, and portfolio careers combining interests beyond the immediate specialty.

The final theme presented participants’ observations about implications of the changing context in which doctors work, especially in relation to the junior doctor contract in England, both for their own work practice and work-life balance, and the health care system overall.
These findings will be presented, using exemplar quotes.

**Discussion**

Trainees’ perceptions of work-life balance, workplace culture and support in different specialties provide insights into changes that might need to occur to recruit and retain junior doctors in those specialties. This information is of importance to Universities, Specialty Leads, Training Programme Directors, Postgraduate Deans and Health Education England and can inform changes such as more flexible working patterns, a more flexible overall training programme and incentive schemes for recruitment and retention. These changes will need to be made promptly in order to recruit and retain talented young doctors.

To conclude, understanding the experiences and perceptions of trainee doctors in relation to careers planning is critical to ensure the future workforce supply for the National Health Service. The factors affecting their decision-making demonstrated by this qualitative research are complex and interrelated and demand more flexible training programmes for the future.

**References**


**BORPA, Intra-conference session Thursday 22nd June 2017 11am – 1pm, Alumni Auditorium**
Name: Matthew Brown, Adam McDermott, Rhian Sheppeard, Imogen Swart-Wilson, Peter Sykes
Current clinical/educational role: Clinical Teaching Fellows
Named supporter: Philip Davies, Academy Dean, Gloucester Academy (University of Bristol)

Description:
Gloucester Academy has an established reputation for the development of educational games. This teaching innovation originated in 2013, when previous clinical teaching fellows created an ‘Educational Games Day’ for medical undergraduates in their last week of term. Encouraged by positive feedback from students, our academy developed a passion for learning through play. During ASME 2016, we facilitated a games workshop, and have since embraced the concept by developing our own games, and enhancing those we have inherited. We are extremely proud to continue to exhibit our expanding catalogue to the medical education community.

This year our team has worked enthusiastically to create new educational games. Highlights include the ‘Million Pound Drop Attack’ quiz developed by Dr Brown, and ‘iDermify’, a dermatology card game created by Dr Sheppeard. ‘Phar-messy’, a medication based escape room, was designed by Dr McDermott and Dr Swart-Wilson. Our team has also worked collaboratively to produce ‘Frostbite’, a teambuilding and leadership exercise.
Finally, we have taken measures to ensure the continuing tradition of educational games in Gloucester Academy. Dr McDermott has created guides for our ‘20 minutes to save a life’ and ‘Phar-Messy’ escape room puzzles, in order to streamline assembly, transportation, and facilitation of the games.

Our games span a number of genres, from board games to interactive ‘escape rooms’, and have been created for topics that are traditionally difficult to teach using conventional methods. We have found the games are particularly effective when delivered as part of small group tutorials for medical students at all stages of undergraduate study.

Why relevant?
Our educational games are relevant to student learning for numerous reasons. Medical school curricula demand students continually assimilate vast quantities of information, which can be overwhelming.¹ Allowing students to have the experience of a game provides an alternative means of learning which is engaging, cognitively challenging, and encourages reflection. Furthermore, a hands-on approach is a prerequisite for the vast majority of these games, thus appealing to kinaesthetic learners, often cited as a favoured learning modality for medical students.²

Our experiences have demonstrated that games offer a stimulating approach to topics, otherwise perceived as uninteresting. For example, our ‘Social Snakes and Ladders’ board game conveys important learning points relating to prompt discharge of hospital patients. These games also provide an opportunity to teach subjects that are underrepresented in the curriculum, such as the ‘iDermify’ card game.

The appeal of these games in education is multifactorial. Firstly, they are highly adaptable. For example, Dr Brown’s ‘Million Pound Drop Attack’ has been used to teach a number of topics, including geriatric assessment and neuropathy. Many games require minimal resources, such as playing cards, making them easy to transport or be replicated. Finally, given the majority are adaptations of established games, the rules are easy to learn and understand.

Our educational games have attracted substantial interest from the wider educational community. The novel escape room ‘Phar-messy’ will be demonstrated at ASME 2017 by Dr Sykes and Dr Swart-Wilson. Furthermore, in February 2017, Dr Sykes and Dr Brown facilitated a ninety-minute workshop at an educational leadership conference in Cambridge using our courtroom game, which teaches non-technical skills, chiefly professionalism. All the fellows have presented our games at medical education conferences in Bristol, Cheltenham, and Keele over the past academic year.

Learners, Peers and Supervisors Feedback Summary
Feedback on our educational games has been overwhelmingly positive. Students have consistently asked for “more games”, commenting on the “interactive” design, and many particularly “loved the escape room”. Verbal feedback from our new ‘Phar-messy’ game included that the activity “made prescribing fun”, and “highlighted the importance of teamwork”. The use of educational games has enabled us to engage our students and optimise learning in the hospital environment.
Delegates at various medical education conferences described the workshops as “fantastic”, and stated they were “going away with a new tool to help with future teaching”. Others commented “sharing the games will be a game changer” and they “hope that there will be a way to share [our] resources more widely”. The University of Bristol medicine programme director has even described the work on educational games as “inspirational”.

One key piece of constructive feedback received during a workshop at ASME 2016 was that delegates desired “a chance to actually play the games”. We reflected on this as a group and have incorporated more interactive elements into subsequent workshops. For example, we have encouraged delegates to tackle our ‘escape rooms’ under timed conditions, and integrated the courtroom game into a medical leadership conference.

**Educational rationale for project and how current evidence was used to develop idea**

Our developing role as educationalists has challenged us to seek novel teaching methods. This project has drawn inspiration from key educational theories including Kolb’s cycle. Educational games can facilitate this process by providing the learner with a concrete experience from which they can reflect, conceptualise knowledge and experiment within the safety of the classroom environment.

Educational literature has focused on the effectiveness of games based on social and cooperative play. Despite few quality randomised controlled trials, the consensus is that games have a number of positive effects on learning. These include enjoyment, knowledge gain, and stimulation of higher order thinking. This is an ongoing field of research, to which our project is contributing. We aim to follow the ‘Best Evidence Medical Education’ recommendations in our research methodologies to ensure we can accurately evaluate educational outcomes.

Finally, educational games are flexible and cover multiple core themes that can be accessed at all levels of undergraduate study. At a time where medical schools are adapting their curriculum to keep up to date with the changing structure and demands of medical training, we believe the use of educational games has the potential for a significant impact.

**References**


**TASME TIE Prize Intra-conference Session Thursday 22nd June 2017, 1.45-3.45pm, Alumni Auditorium**
Name: Mr Ankur Khajuria
Current clinical/educational role: Academic Surgery Foundation Trainee and Fellow of the Higher Education Academy (FHEA)
Named supporter: Professor Jeremy Levy (senior author)

Description
I utilised my previous experiences as a Fellow of the Higher Education Academy (HEA), Honorary Anatomy Demonstrator and Clinical tutor (utilising videobased deliberate practice) to conceive, design and lead a team to deliver two innovative national (UK) preparatory teaching conferences (“High Yield for AFP Success 2015, 2016”) for 200+ medical students from 11 different UK medical schools. I designed and delivered a teaching programme with well-defined learning objectives, using lecture based and small group teaching on critical appraisal, clinical emergencies, interviews, CV writing and sessions on region-specific application experiences, with focus on cognitive apprenticeship. I followed the HEA’s UKPSF framework and developed effective learning environments. I utilised mentimeter to maximise student engagement and to provide real-time anonymous feedback, encouraging reflection and nurturing meta-cognition through providing different strategies to excel in AFP application process. I sought to respect different learning styles as described by Kolb and also designed a ‘CV checking service’ where delegates submitted their CVs which were marked by the faculty and specific feedback provided to enhance quality. I also orchestrated and designed a research study to evaluate our teaching methods with results presented at the prestigious International Medical Education Conference (IMEC) 2017 in Kuala Lumpur, Malaysia (grant funding from Imperial Medical Education Research Unit and NIHR), as well as the TASME Spring Conference 2017 where I was nominated for the TASME Young Educator Award. 2017. The manuscript has been published with me as the first author. It is the first study in available literature that demonstrates that a focused intervention on academic medicine may enhance the confidence, knowledge and preparedness of candidates applying for a UK clinical academic programme. I am designing a longitudinal study to evaluate whether such interventions on academic medicine can enhance numbers entering and remaining in academic medicine.

Why relevant?
Despite the importance of academic medicine in advancing healthcare, recruitment of junior residents into academia is an international concern. “High Yield for AFP Success” is an evidenced-based initiative that has the potential to work in collaboration with bodies like the UK Foundation Programme Office (UKFPO) and Health Education England (HEE), medical school faculty members, researchers, supervisors and administrative staff to enhance the knowledge, preparedness and confidence of medical students/junior doctors in applying for clinical academic programmes. This, in turn, may enhance trainee numbers entering and remaining in academic medicine. My intervention has positively influenced the applications of many medical students, facilitating the pool of high quality UK junior academic doctors. I have previously published as a senior author highlighting concerns of the ‘scholar’ CanMEDS domain being a ‘neglected competency in tomorrow’s doctors’ and I am passionate to continue to educate and facilitate the recruitment of high quality UK junior doctors into academia to ensure that UK remains at the forefront of medical research. ‘High Yield’, as the first evidence-based AFP initiative, has caused a paradigm shift with other AFP trainees now also starting to set up similar initiatives, recognising the importance of continuing to build the crop of motivated, high quality academic junior doctors in the NHS. My next step will be to conduct similar initiatives for Academic Clinical Fellowships (ACF) and Clinical Lectureships (ACLs) and to conduct a longitudinal cohort study to evaluate whether such interventions on academic medicine can augment trainee numbers entering and remaining in academic medicine. We will be leading High Yield for the third successive year this year due to its growing reputation as the only ‘evidence based’ AFP preparatory teaching course and we hope to gain support of the UKFPO to further formalise and accredit our evidence based teaching programme.

Learners, Peers and Supervisors Feedback Summary
The feedback from learners culminated in a published research study. 100+ students from 11 UK medical schools responded. The teaching programme enhanced (statistically significant) the confidence, preparedness and knowledge of students in applying for a clinical academic programme. They found the conference useful in enhancing awareness of a UK Clinical academic programme and in encouraging them to apply. They valued being taught by AFP doctors, receiving up-to-date experience based guidance and in identifying the breadth and relative quality of different resources. I was commended for citing my own published literature to support my points, utilising lesson plans for structure, tailoring to different learners’ needs, reflecting on student evaluation and using technology including mentimeter effectively. This experience of teaching and delivering a national teaching programme has greatly nurtured my teaching profile, allowing me to present and be critiqued by world experts in medical education at the IMEC Conference 2017 in Malaysia. It has enhanced my confidence in different teaching
environments and utilising innovative methods such as video-based teaching to enhance students’ clinical examination and procedural techniques. I have been awarded the prestigious Teaching Hero Award by Imperial College London and the Leadership Merit Award by North West Thames Foundation School.

**Educational rationale for project and how current evidence was used to develop idea**

Academic medicine is crucial for healthcare advancement. Clinicians have a duty to remain up to date and must be proficient in critically appraising research data. However, poor recruitment of junior doctors into academia is an area of concern globally. In the UK, clinical academics make up only 6% of the medical workforce and numbers are declining, and 63% of the academic clinician workforce is now aged over 46. Cited concerns include lack of exposure, lack of a transparent career structure as well as inflexibility in academic/clinic work balance. The NIHR integrated clinical academic pathway was developed to address these issues. The Academic Foundation Programme (AFP) was developed as the ‘first opportunity for research’ post graduation. Conferences can aid educational scholarship, networking and collaboration, with early exposure to the culture of medical academia. However, research on whether such conferences/ courses can facilitate trainees’ confidence and preparedness for clinical academic programme applications is scarce. Thus I developed my idea with the aim of evaluating whether a national focused course specifically on academic medicine could enhance knowledge, confidence and preparedness of UK medical students wishing to apply for a clinical academic programme (AFP) and encourage them to consider clinical academic careers.

*TASME TIE Prize Intra-conference Session Thursday 22nd June 2017, 1.45-3.45pm, Alumni Auditorium*
Name: Doug McKechnie

Current clinical/educational role: Clinical Teaching Fellow, University College London Medical School

Named supporter: Dr Sarah Bennett

Description:
I designed, planned, implemented, participated in, and evaluated a student-faculty lunch scheme for Year 1 MBBS students at University College London Medical School (UCLMS).

At the beginning of my role, the Year 1 academic lead expressed concern that some students felt isolated and disengaged with the faculty. I conceived a plan for a student-faculty lunch scheme, and together we obtained funding from the UCLMS directorate for the scheme (totalling £2000). My design for the programme incorporated insights from other faculty members, from students, and from reading about related programmes in other degree courses in the USA and Canada.

I secured commitments from 20 faculty members (including myself) to host student lunches, and finalised the details for reimbursement with the UCLMS finance office.

Year 1 students signed up via an online signup page of my own design, and in groups of six were assigned a faculty ‘host’. They then met their host for lunch in a café of their choosing near the UCLMS campus, during their lunch hour between scheduled teaching. The intention was for students and faculty to have an opportunity for informal socialisation; getting to know one another a little, which is otherwise difficult in a lecture-heavy course with a year group size of over 300 students.

I have given regular updates on the successes of the programme to the UCLMS directorate, and have supervised several interested students who have helped me publicise the scheme to other year 1 students.

I have led the evaluation of the scheme, seeking informal feedback from staff & students who attended, and leading formal focus groups to explore reactions to the scheme from students (including those who did not sign up).

Over 150 Year 1 students signed up to attend the lunches. The programme is likely to continue in the next academic year, with modifications and refinements as suggested by the evaluation activities.

Why relevant?
Promoting student engagement in higher education has numerous benefits, including increased student attainment, student retention, and conferring a greater sense of belonging to the institution. Out-of-classroom interactions between faculty and students are one way of enhancing student engagement. UCLMS has a large year group size, is situated in the centre of a metropolis, and has a mostly lecture-based course in years 1 & 2. There are few occasions on which staff and students can meet in an informal setting, and many students felt uncomfortable or unconfident in approaching staff members in the few opportunities that there were.

The lunches provide a unique opportunity for my students to meet faculty members, and develop their sense of belonging at the university and as part of the profession. Faculty members found them enjoyable, a useful way of gathering informal feedback from students about the course, and a unique way to learn more about them as individuals and their experiences.

The lunch scheme is, to my knowledge, the only such scheme at any UK medical school. It has been a cost-effective and simple way to increase student-faculty engagement and could easily be replicated at any other medical school, later in the course, and indeed in the postgraduate arena.

Learners’ , Peers’ and Supervisors’ Feedback
Over half of the year group signed up to participate in the scheme.

Students who participated tell me that they enjoyed the experience. Having a ‘free lunch’ was an important incentive to participate, but also made them feel that the medical school was welcoming them to the course. They enjoyed learning more about faculty members and sharing their own experiences about the course and life in London. Generally, they felt it gave the institution more of a ‘human face’.

Faculty members found the lunches entertaining, and enjoyed learning more about their students as individuals. They found that students provided useful, honest feedback about the course face-to-face, and gained unique insights into the student experience.

Educational rational for project and how current evidence was used to develop idea
My interest in this idea was sparked by a faculty tutor quoted in Cottrell et al. (1994), who noted that being a personal tutor and speaking to students in an out-of-classroom setting was “the only way to find out what’s really going on at the institution”. Although the lunch scheme was primarily designed to enhance student engagement, this helped me convince faculty members that it could also provide valuable, honest, and insightful feedback on the course as an ancillary benefit.

Lewinski et al. (2016) reported on their student-faculty lunch scheme in a nursing school in the United States, finding that it was a cost-effective way to enhance student-faculty engagement and foster ongoing mentor-mentee relationships. This was a major inspiration for my programme (though the exact structure of my programme differs).

Thomas’ (2012) report on student engagement and belonging highlighted the importance of out-of-classroom interactions between students and staff in building a positive institutional culture. This report convinced me of the merit of my proposed scheme, and helped me secure funding from the UCLMS directorate.

References

TASME TIE Prize Intra-conference Session Thursday 22nd June 2017, 1.45-3.45pm, Alumni Auditorium
Name: Dr Fiona Thomson


Named supporter: Dr Wendy Watson

Description

My main achievement as a clinical teaching fellow has been the creation of “Going Professional”, an interactive session using point-of-view (POV) filming to facilitate preparation for practice in final year medical students. This was a novel idea conceived by myself and developed with support of simulation practitioner, Dr Ian Morrison and the clinical skills department at the University of Aberdeen. My aim was to create an immersive learning event addressing areas of clinical practice that graduates are mostly under prepared for, that the current MBChB curriculum does not explicitly teach. I also sought to overcome challenges associated with small group ward simulation exercises and reduce the heavy resource burden in terms of time, staffing and use of clinical areas.

Drawing on influences from first person filming techniques in cinema and computer gaming, I designed a series of scenarios around the traditional ward round where the POV camera, in this case a GoPro HERO4, was worn on a head strap by a member of staff playing the role of a foundation doctor. Additional faculty members portrayed other characters including patients and members of the clinical team. I devised a workbook and accompanying PowerPoint presentation in conjunction with the scenarios and students were encouraged to perform tasks in real-time in relation to the videos. Topics included:

- Participating in a ward handover
- Documenting a ward round entry
- Writing a discharge letter and prescription
- Interpreting X-rays and ECGs
- Making decisions about treatment and prescribing medication in mock drug charts
- Dealing with interruptions
- Responding to medical emergencies

Examples of model answers were incorporated into the presentation with pauses for discussion of important issues and reinforcement of salient learning points. The interactive lecture lasting two hours, was delivered to all final year students in Summer 2016.

Why relevant?

Explain why this activity is particularly relevant to trainees or your clinical area and its relevance to the wider educational community (max. 300 words).

In 2014 Monrouxe et al reported to the GMC UK medical graduates’ preparation for practice. Authors stated that foundation doctors’ feelings of preparedness were facilitated by familiarity with the specific working environment and confidence in their training. They also identified the following areas where graduates felt mostly unprepared:

• Safe, legal prescribing
• Clinical reasoning and decision making
• Early management of emergency conditions

From an anonymous survey used to evaluate the impact of the GoPro ward round, we know that many of our local final year students share these feelings. Although 80% described themselves as “prepared to some extent”, when ranking individual skills, weighted averages revealed four areas where they felt least confident:

• Decision making
• Emergency clinical situations
• Prescribing and administering drugs
• Prioritisation

The GoPro session was aligned to GMC Outcomes for Graduates (2015), with the specific aim of targeting these areas of low confidence.

In terms of innovation, POV filming is well established in social sciences to facilitate the study and systematic recording of human cultures, known as ethnography. However, few reports exist regarding POV video applications in medical education. Lynch et al (2012) describe how POV video vignettes filmed in a simulated environment can be used to teach clinical skills to student paramedics. While Leslie et al (2014) report using recordable video sports glasses to record trainees performing central neuroaxial blockade as a means of workplace-based-assessment. There are no published reports on the use of POV video techniques in this particular way and I believe that our experience will be of interest to the wider education community, including those involved in healthcare simulation.
with an interest in new technologies. There are many other potential applications of POV videos in medical education and I hope to add to emergent literature in this area (in practice report submitted to BMJ STEL).

**Learners’ Peers’ and Supervisor’s Feedback**

Evaluation of “Going Professional” was gathered through an anonymous online survey to which one third of the student cohort responded (46).

- 93% found the session useful
- 91% enjoyed the session
- 80% were made aware of aspects of work as a junior doctor that they had not considered before
- 83% agreed it was a good introduction to the in-situ ward simulation exercise that followed later in the year
- 80% felt that the session prepared them for student assistantships
- 87% agreed that filling out the workbook in real time made the session interactive
- 69% felt that the completed workbook would serve as a helpful revision tool

Free text comments highlighted prioritisation and decision making as key skills that students felt more confident in after the session.

I also presented the concept of “Going Professional” at a local meeting for the senior years MBChB faculty where the project received a huge amount of interest from a variety of medical educators in clinical and non-clinical roles. The feedback was overwhelmingly positive and several people expressed interest in using POV video techniques to facilitate learning in their own specialities, therefore presenting exciting opportunities for future collaborations with NHS Highland and NHS Grampian colleagues.

**Educational rationale for project and how current evidence was used to develop idea**

The GMC specify that medical students must have access to technology enhanced and simulation-based learning opportunities, while a recent Best Evidence Medical Education (BEME) systematic review on high-fidelity medical simulations also acknowledged that “simulation-based medical education is best employed to prepare learners for real patient contact”. Small group ward simulation exercises are employed in a number of institutions, including the University of Aberdeen, to replicate patient contact in a realistic, yet safe learning environment. The theoretical framework that underpins such simulations is that of experiential learning. There is evidence that ward simulations offer valuable educational experiences. However, for large cohorts of students we have found repeated small group simulations to be costly in terms of time, staffing and use of clinical areas, often posing timetabling issues. In the development of “Going Professional”, filming on the simulated ward was completed in a single day and the GoPro footage now exists as a permanent resource. By using POV video technology were able to deliver an en masse ward simulation and we believe the first-person perspective helped to immerse learners in the scenarios. The interactive nature of the session also encouraged student engagement thereby promoting deep, sustained learning.

**References:**


**TASME TIE Prize Intra-conference Session Thursday 22nd June 2017, 1.45-3.45pm, Alumni Auditorium**
Thriving Skills for FY1 – A face-to-face course to support resilience skills of trainee doctors.

Name: Dr Lesley Curry
Current clinical role: Scottish Clinical Leadership Fellow (SCLF), NHS Education for Scotland (ST7 O&G, OOPE)
Named supporter: Professor Clare McKenzie, Postgraduate Dean NES

In 2016 a working group was set up within NHS Education for Scotland (NES). The objective of this group was to implement methods of supporting trainees to adjust and thrive within working life in the modern NHS. The overall aim is to have a complete support package, with face to face training as the first phase.

I joined this group as a Scottish Clinical Leadership Fellow (SCLF) in January 2017. I reviewed the literature on resilience and wellbeing in junior doctors; on interventions used to support wellbeing; and current availability of resources in other NHS deaneries. This informed the development of a three-module workshop. The course material covers an understanding of the relationship of stress and workplace function, the emotional aspects of managing error, and facilitated peer discussions. Each member of the group has taken an area of interest to develop, and I have worked specifically on materials for the second module around error.

This project will be piloted from Sep-Nov 2017 among a voluntary cohort of foundation year one doctors in NHS Tayside, with a maximum of 16 participants. I have sought ethical approval on behalf of the NES Resilience group from the East of Scotland Research Ethics Committee, and this has been waived.

This initial pilot will be delivered by members of the developing group. I will be helping to communicate with educational supervisors about the pilot. I will also undertake focus group research after the course, with an experienced research assistant, and evaluate the educational and emotional impact of the course through quantitative and qualitative analysis.

The bursary would be used to support this pilot project:

I. Providing course materials for participants (handouts of slides, contact lists for support, reflective exercises etc)

II. Providing incentive (lunch or small voucher) to encourage continued participation to complete all three modules and the focus group, acknowledging the difficulty for trainees to attend from busy clinical areas

Summary of Educational rationale for project

There is evidence that doctors in training are feeling more pressured, devalued and disengaged than ever. Four out of five junior doctors report excessive stress\(^1\). Many are not continuing from foundation to higher training, with around 10% citing burnout as the reason\(^2\). In addition, the link between workplace wellbeing and patient safety is now well-established. This is therefore an area of concern to patients, employers, and those with an educational responsibility.

There is some low-level evidence that both psychological interventions and workplace based changes can reduce stress among healthcare workers\(^3\). However, few good quality studies demonstrate any more than a positive trend in improving resilience. A review of interventions for junior doctors has shown positive evaluations, but no statistical evidence of improvement in resilience skills. None of these studies have looked at how the positive benefit is achieved, and this is our aim in this study.

Foundation doctors are especially vulnerable to the challenges of work, with concerns over finding their role, fear of and managing errors, career development, and support. Organisational stressors such as rota and workload compound these anxieties\(^4\). Work has been done which looks at first year doctors’ experiences and their preparedness for practice. This research, along with input from current foundation trainees, has informed the module content.

Evaluation of the Event

Evaluation of both the emotional and educational impact of the course will be undertaken.

To identify improvement in individual resilience, a combination of validated tools, the Brief Resilience Scale, and Brief Resilience Coping Scale will be used. Although the numbers of participants is small, and statistically significant changes unlikely, a positive trend in evaluation would be expected in keeping with current literature.
To explore specific factors that may contribute to positive benefit, we propose to hold focus groups with participants (6-10 in each group) following the completion of the course. Focus groups can reveal useful themes, developed via group challenges and prompts and common experiences.

The educational impact of each module and the course overall will be evaluated separately. We will look at how it has addressed trainee needs, whether it has met the course objectives and whether it has been felt of positive benefit for attendees.

The research question is ‘how’ this intervention may be effective, rather than just whether there is a positive benefit. Identifying ‘how’ will contribute to the literature, and enable an action research methodology to be used. This will guide changes for development and improvement in the modules, and allow the essential methods to be shared across other regions of NES for the benefit of other trainees.

*TASME TIE Prize Intra-conference Session Thursday 22nd June 2017, 1.45-3.45pm, Alumni Auditorium*
Exploring clinical decision making amongst surgical trainees in a simulated environment

P Sutton, Specialty Registrar and Honorary Senior Lecturer, University of Liverpool

Clinical decision making is a relatively poorly understood non-technical skill, but one which is essential to surgeons both in and out of the operating theatre. We have planned an exploratory pilot study to help better understand clinical decision making in an acute clinical setting, specifically the assessment and management of the critically ill surgical patient. The study utilises a simulated scenario, after which the participant watches the video with the investigator and the performance is evaluated using teach-back interviewing. The transcripts of these interviews will be thematically analysed using standardised techniques to explore behaviourism with respect to decision making.
A Flipped Classroom versus a standard lecture to teach CNS Neurochemistry: Does This Benefit Student Learning?
A Kardasz
The Hull York Medical School

Background:
The aim of the study was to investigate whether undertaking a flipped classroom approach was beneficial to the students' learning in comparison to just that of a lecture.

Methodology:
Year 1 students on both the Hull and York sites were given access via the medical school’s virtual learning platform to 5 short you tube videos, in addition to a short chapter on neurochemistry and neurotransmitters to read from a medical biochemistry textbook 7 days prior to the session. The videos included a number of topics covered in the 50 minute lecture. In the session, students were given a short MCQ test to assess their learning of the pre-session material. The students were divided up into small groups and were then given a short scenario on anxiety to read followed by 8 short questions to test their application of knowledge. They then completed 7-question questionnaire to using a 5-point Likert scale from strongly disagree to strongly agree, with space for free text comments.

Results:
The mean scores from the questionnaire suggest that students at Hull compared to York found this method useful to their learning, applying their knowledge and problem solving. The students’ free text responses indicated that they preferred the flipped classroom as a revision session rather than as a replacement of the lecture.

Discussion:
The consensus from both sets of students was that as a method it was useful to aid their revision, but not to replace the normal lecture. This may reflect that fact that these students have not as yet fully embraced the transition from a teacher-centred to a student-centred learning approach.

Ref: 014, Board: A2
Developing a Plain Film Radiology Course at a Teaching Hospital
C Bishop, M Adi, G Mitchell, R Riordan
Plymouth Hospitals NHS Trust

Background:
The chest radiograph is the most commonly performed diagnostic radiological investigation and has changed very little in its role over the past many decades. The indications for requesting a chest radiograph are legion and diverse, as are the people interpreting them who range from a consultant radiologist to the newly graduated foundation year 1 doctor, and irrespective of grade their level of confidence varies greatly. For all the clinicians making a chest radiograph request, a good understanding of normal anatomy and common pathologies is essential for good patient care, both in helping to decide on the correct treatment but in avoiding excess radiation exposure through unnecessary radiographs and even cross sectional imaging. We helped our local university, Peninsula College of Medicine and Dentistry, to set up a chest radiograph course for their Physicians’ Associates to address these needs.

Methodology:
The one day course involved lecture based teaching followed by hands-on examination of real chest radiograph examples on individual workstations and assessments to cement and assess new knowledge and skills. The day was run by a mix of radiology registrars and consultants, who tackled broad subjects including the physics, anatomy and common pathologies of the chest radiograph. We have subsequently adapted our course and delivered it to our cohort of ST1 grade radiology registrars, and separately again to a diverse group of our tertiary centre’s junior doctors of different grades and specialties. Following the success of this format, we developed a musculoskeletal (MSK) trauma plain film course using the same format.

Results:
We have now run the chest radiograph course five times and the MSK trauma course once, with a total of 67 participants. Written feedback demonstrated that 100% of the participants felt more confident in their understanding of plain film radiology of the chest/MSK, as compared to 24% prior to the courses. We will present the learning techniques utilised including lecture formats, pre-course self-assessment and anatomy and pathology quizzes, and the strategies used to enhance the radiological aspects of the sessions. By reflecting after each course session and with the feedback, we have been able to improve our course taking into account the learning needs of our trainees.

Discussion:
The time taken for a formal report to be issued for emergency department and inpatient radiographs is variable. This places high importance on ensuring that the people requesting chest and MSK radiographs and making clinical decisions based on their interpretation in the acute setting have the necessary skills to do so safely. Learning to interpret chest radiographs should involve focussed sessions such as our course, after which the new skills should be consolidated in daily practice. Through this course, the combination of didactic and hands-on experience has led to excellent feedback being received from each group of attendees. The chest radiograph course is now a regular annual fixture in the ST1 Radiology registrar training program at our institution and we hope to welcome more medical staff onto the courses in the future. We found delivering a course to a diverse audience very rewarding and helped to promote interprofessional development and allowed us as trainers to acquire new skills to aid teaching. A chest radiograph course should be a compulsory component for all graduates who will be involved in decision making in patients care, and this could be implemented in all regions with the development of similar courses to our own.

Ref: 243, Board: A3
Keeping abreast of new developments in teaching - using Clinical Teaching Associates to teach the breast examination
J Taylor, J Moffatt, A Chaudry, K Jones
Swindon Academy

Background:
There are more than 50,000 new cases of breast cancer annually(1). National guidance advises that women with a breast lump, nipple changes, breast pain or an axillary lump should be referred to a specialist breast clinic(2). There is rising pressure to see women within a 2 week period, currently achieved in 94.08% cases(3), and improved competency in breast examination will become increasingly vital in meeting referral targets. The best way to teach medical students intimate examinations is frequently under debate and there is a delicate balance between education needs and ethical requirements(4). Often undergraduate experience of breast examination is via manikins or in a consultant led clinic. Opportunities to gain practical experience are often limited by time or patients declining consent for examination(5).
Swindon Academy has a well-established Clinical Teaching Associate (CTA) programme for gynaecology examinations which is consistently perceived as superior to traditional teaching by students(6). From this model we have developed a novel programme to train our students in breast examination.

Methodology:
The breast training programme commenced in July 2016 and data was collected prospectively. The participants were asked to rate confidence in various aspects of the examination using a Likert scale 1-10. They were also asked to compare CTA training with traditional teaching. Additional qualitative feedback was collected.

Results:
Thirty seven participants have completed the training programme to date. Our results show that CTA training is superior to traditional teaching in all aspects. Confidence in performing the examination after CTA training was 9.30 compared to 6.1 following traditional teaching ("examination which you can't recreate with a manikin").

Discussion:
This on-going study supports our findings from CTA pelvic examination programme that CTA teaching for intimate examinations is superior to traditional methods. Further exposure and funding of such programmes may also be useful in primary care training to relieve pressure on hospital services.

References:
Near-peer teaching of clinical skills: 4th years teaching 3rd year students
P Medland
Bath Royal United Hospital

Background:
Teaching is highlighted as an important skill in the GMC’s Duties of a Doctor[1], and ideally training for this role should start in medical school.[2] Near-peer teaching has been defined as teaching between trainees on the same level (e.g. medical school, or foundation trainee), separated by one or two years of seniority. 5th and 3rd year medical students at Bath Academy are currently taught clinical skills, such as venepuncture, IV cannulation, ABG taking, and catheterisation in a skills lab by teaching fellows and staff from a nursing background. By the 5th year, the students will have been taught some of these skills already, however, they are all new to the third year students. With some additional training, the 5th years could teach these skills to the 3rd year students, and the experience could be mutually beneficial. Peer-led teaching at medical school has been shown to improve academic performance,[3] and also retention and application of knowledge. [4] Other expected benefits include: improving motivation, and providing role models for junior students, [5] developing communication skills, leadership, confidence and teamworking; Skills which will contribute to the development of the students’ professionalism early in their medical careers. [6]

Methodology:
Demand for teaching of particular clinical skills amongst 3rd years, and the availability of potential 5th year teachers will be determined with sign up sheets. 5th year teachers will design their demonstration, emphasising three to four learning objectives, then practise their demonstration with teaching fellows until they feel prepared to teach the skill independently. The sessions will be delivered by the 5th year teachers, and observed by teaching fellows. The effectiveness of the sessions will be assessed with pre-session and post-session questionnaires to determine the extent to which the sessions improve their understanding of the topics, their retention of the information, and their communication skills. Students who did not take part in the session will also be asked to complete the questionnaire so that results can be compared with a control group. Follow up interviews and questionnaires will be used to assess the long-term retention of skills, and whether they have been put into practice in the clinical environment.

Results:
Results will be collected by the end of April. Thematic analysis of the free text boxes will be conducted. Results will be presented at the ASME conference in June 2017.
Expected results are that the third year students will become more confident in the skill being taught, and their long-term retention of the skill will be improved. They may also be more likely to practise the skill in the clinical environment. The fifth year students should also see these benefits too, and will also become more confident teachers and communicators.

Discussion:
Results from the questionnaires, interviews and focus groups will be discussed along with conclusions.

References:
Simulation in Basic Surgical Skills improves confidence and willingness to ask for training
OD Brown, M Wijeyaratne, I Pignatelli, A Bridgeman, J Randall
University Hospitals Bristol

Background:
Surgical skills training courses are known to improve competence amongst delegates and are commonly used as components of both undergraduate and postgraduate training programmes. Confidence is also known to be affected by simulation training but is less well documented in the context of surgical skills training amongst junior doctors.
We were keen to assess the impact of a skills course on confidence in specific skills, their real-life applications and the behaviour of foundation trainees on surgical firms.

Methodology:
A surgical skills course was organised for foundation doctors. The course consisted of three stations, one covering hand-tying skills, one covering instrument tying and simple suturing skills, the last covering more complex suturing tasks.
After registration, delegates were asked to complete a pre-course questionnaire assessing their confidence in the specific skills taught on the course and their confidence in undertaking real-life applications of these skills. Additionally, candidates were asked to rate their ability to participate in operations and willingness to ask for procedural training. On completion of the course, the delegates were required to complete the same questionnaire along with basic course feedback.
The questionnaires used identical questions, asking the delegates to rate their confidence in specific skills on five-point rating scales.
Data was collected using SurveyMonkey and collated after export in Microsoft Excel. Delegate responses were stratified and changes in confidence were assessed for statistical significance using a two-tailed, paired t-test in MS Excel. P values of less than 0.05 were considered statistically significant.

Results:
Thirteen of the pre- and post-course surveys were received. From these, eleven paired responses were included. Two responses from each survey were excluded from final analysis because of a lack of a paired survey. General feedback for the course was good with an overall mean score of 4.8/5.
Self-rated confidence improved across all specific tasks by a mean of 1.4/5 points (4.1, 0.3, 0.7, 0.2, 0.5, 0.9, 0.7, 0.2, 0.1, 0.4). Being asked to assist in Theatre (0.5, p=0.096), Being Asked to Stitch a Wound in ED (0.7, p=0.012), Being Asked to Tie a Drain (or Similar) on the Ward (1.0, p=0.033) and being asked to Close Skin in Theatre (0.9, p=0.002).
There was no significant change in whether delegates felt a part of the surgical team (0.2, p=0.441), welcome in theatre (0.0, p=1.000), able to ask questions in theatre (0.1, p=0.588) or able to scrub into an operation (0.1, p=0.588). Delegates did, however, feel more comfortable asking to do, or to be shown how to do, operative steps (0.4, p=0.038).

Discussion:
The results demonstrate a clear improvement in self-reported confidence amongst delegates in all taught procedural skills and relevant “real-world” scenarios. Interestingly, the course also appeared to improve delegates’ willingness to ask for on-the-job teaching in procedurals skills.
This study provides support for basic surgical skills training, organised by Surgical Trainees and demonstrates how it can actively encourage trainees to participate in operating theatre procedures.
Follow-up questionnaires have been sent to the course delegates to assess the longevity of these changes. (Results will be included in final presentation)

Ref: 075, Board: A6
Take Note! Student Performance in Documenting Ward Round Consultations Before and After An Interactive Teaching Session Using Videos
J Ford, H. Bothwell, J. Taylor, K Jones
Swindon Academy, The Great Western Hospital

Background:
Accurate and detailed documentation in patient notes reduce error and save lives (1, 2). Formal training during medical school in this area has been encouraged(3), but is rarely offered, and a survey of doctors within our Trust has shown a reluctance to allow students to practice their documentation skills ‘on the job’ due to time constraints and lack of student contact-time.
We developed a teaching session involving videos of simulated ward round consultations and assessed student performance before and after the session using similar videoed consultations to see if performance had improved.

Methodology:
Six third year medical students were asked to document two videoed simulated ward round consultations. One medical consultation of a medical patient who was medically fit for discharge following a course of intravenous antibiotics for pneumonia, and one surgical consultation of a young girl needing explorative laparoscopy for suspected appendicitis. For each consultation a series of 20 marks were awarded for adequate documentation of patient demographics, date, time and location, current problems, observation results, investigation results, impression, plan and signature with bleep/GMC number. A mark was also assigned for general legibility. The students then underwent an interactive teaching sessions involving two further simulated consultation videos with specific learning objectives that the students were able to practice their documentation with. The original videos were then repeated with similar time constraints than before.
The process will be repeated for eight additional third year medical students and a modified version will also delivered to thirty final year medical students in the next two months.

Results:
Student performance in both medical and surgical ward round documentation improved significantly following the teaching session. Students improved by an average of 3.333 marks in the medical scenario (management plan. When considering both surgical and medical scenarios together, students documented a diagnosis just 4 times out of a possible 12 prior to teaching, after the session 11 diagnoses were stated.

Discussion:
Communication between health professionals is vital to maintain patient safety, and documentation of the ward round is one example of this. Prior to formal teaching, third year medical students performed at a standard that can be expected at this early stage of their training. Documentation of diagnoses and management plan was particularly poor, which highlights why some doctors may be reluctant to allow students to develop their documentation skills on the ward round. However, students performed significantly better following a formal teaching session using videos of simulated ward rounds in a controlled environment, especially in areas whereby communication between healthcare professionals is of most importance. We intend to evaluate whether a similarly positive impact can be made using a modified version of this teaching session on final year students within the next few months.

References:
Ultrasound guided peripheral venous access: A practical teaching tool to prepare students for the use of point of care ultrasound

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Background:
Ultrasonography has an increasing role in the hospital setting across numerous specialties. Several studies suggest that teaching practical ultrasound skills to medical students is feasible and is beneficial in preparing for postgraduate training (1). Ultrasound teaching is commonplace across Europe and the United States. However, within the UK, medical undergraduates traditionally have had limited exposure to ultrasound during their training. A recent review identified that British students currently have no hands-on experience of ultrasound imaging and thus are not confident in image interpretation. Furthermore, students have specifically requested a focus on developing ultrasound skills within the undergraduate curriculum (2). Vascular access is a common indication for ultrasound imaging, which is frequently utilised by trainees for procedures such as central line insertion and peripheral venous access. The aim of this study is to evaluate whether teaching practical ultrasound skills within the context of this familiar procedure, is effective in preparing medical students for the use of ultrasound as a point of care imaging tool.

Methodology:
Ethical approval has been granted by University of Bristol. Final year medical students will be recruited to participate in a practical teaching session on ultrasound guided peripheral venous access. An observed procedural skill assessment will be used to assess ability to identify vascular structures, and insert a cannula under ultrasound guidance using a mannequin. Data will also be collected through pre and post teaching evaluation to establish whether there is change in behaviour and self-efficacy. Key outcomes include change in actual and perceived skill level, confidence in use of bedside ultrasound, and preparedness for further training in other ward based ultrasound techniques.

Results:
Full results of the pre and post intervention evaluation will be available for presentation. Recommendations for future practice will also be discussed.

Discussion:
Point of care ultrasound is being increasingly used across various specialties. Medical students will informally encounter ultrasound during their training, although there is currently little focus within the undergraduate curriculum in the UK. Teaching students to use ultrasound within the confines of a familiar procedure could offer a useful tool to prepare students to engage with ultrasound in other clinical settings.

References:
Using simulation to improve the airway skills of theatre recovery nurses
V Pattni, A McNutt, E Thackeray
University of Bristol

Background:
Airway skills in theatre recovery post-operatively are an important skill set for theatre recovery nurses to have. However, airway skills during emergencies require experience to execute effectively. More junior members of staff may have less confidence in such emergencies, given that airway emergencies are relatively rare for the majority of elective cases where ASA grades for patients are typically between 1 and 2. Simulation is an evidence-based teaching method which can be used to train staff in such areas, and has been widely used in other areas of medicine to improve the skillset of clinical staff (1). This aim of this study was to assess whether the use of simulation could improve the performance of theatre recovery nurses when managing a patient’s airway.

Methodology:
The study was carried out over a 3 month period from October to December 2016 in theatre recovery at our trust. In order to establish a baseline of skills which covered the majority of theatre staff, an initial simulation scenario was run (A) which focussed on a dislodged LMA in a patient post-operatively. Timings were recorded in minutes for 3 key variables from the time the patient started deteriorating: attempting airway manoeuvres on the patient (head tilt, jaw thrust); removing the LMA; inserting an airway adjunct such as an oropharyngeal airway following LMA removal. Scenario A was run 5 times between October and November. Scenario B was then run to ascertain whether there was any improvement in recognising and performing airway skills more rapidly, when compared to Scenario A. Scenario B was run twice in December to establish whether any preliminary improvements had been made. Timings were then compared to Scenario A on the specified variables.

Results:
Scenario A was delivered to 12 different staff in theatre recovery, out of a possible 27 staff. The average time from when the patient developed a compromised airway to performing an airway manoeuvre was 1 minute 23 seconds. The average time from when the patient developed a compromised airway to removing the LMA was 2 minutes 53 seconds. The average time from when the patient developed a compromised airway to inserting an airway adjunct was 4 minutes 19 seconds. Scenario B was then delivered to 7 different staff in theatre recovery, out of 27. The average time from when the patient developed a compromised airway to performing an airway manoeuvre was 1 minute 25 seconds. The average time from when the patient developed a compromised airway to removing the LMA was 2 minutes 39 seconds. The average time from when the patient developed a compromised airway to inserting an airway adjunct was 4 minutes 18 seconds.

Discussion:
Our results show a minor change in the time it takes theatre staff to recognise and then manage an airway problem. Staff showed an improvement of 14 seconds and 1 second respectively when removing the LMA and inserting an airway adjunct. A limitation of this study was that scenario B was only run twice, meaning that fewer staff were covered in scenario B. Subsequently, data was subject to more variation. On further analysis, only 4 staff who participated in scenario B had actually completed scenario A, which meant that many of the staff completing scenario B had not received specific simulation training in the airway, which may have underestimated the improvement in results. To improve this study, Scenario B needs to run at least 5 times, as with Scenario A, to ensure adequate coverage of staff. One positive of this study is that it attempts to demonstrate an improvement in skill set by objectively auditing an improvement in time of a skill, rather than simply looking at whether a candidate enjoyed the session, as described by Kirkpatrick’s training evaluation model (2). Simulation has been shown to enable staff to improve clinical skills and performance, as highlighted by Miller’s educational pyramid (3), and it is likely in this study that findings were limited by paucity of data.

References:
Linguistic patterns linked to emotion in medical students' reflective writing
L Ghani, N Salooja
Imperial College London

Background:
The General Medical Council (GMC) highlights the value and importance of reflective work and furthermore recommends that medical students are taught to reflect (1). There is little guidance, however on how to teach reflection and in particular the importance and role of including and analysing emotions associated with an event.
In our undergraduate curriculum, students are taught to reflect within the context of a one-week teaching skills course. Following their teaching on the topic, students are asked to submit a written reflection on something that has an impact on them during the week using a 'what'-'so what'- 'now what' model (2). In this study we have investigated linguistic patterns within reflective work in particular expression of emotions and have looked at differences between male and female participants with a view to informing and developing our teaching on this subject.

Methodology:
We have analysed historical reflective data from 24 students (12 female). Text was analysed according to word count, theme and emotional content. 8 categories of emotion were considered based on the model described by Plutchik (3): fear/anxiety, anger, sadness, joy, disgust/dislike, trust/acceptance, anticipation and surprise. Use of emotional words, context and tone were considered. Analysis was conducted independently by two co-researchers and discussed to consensus.

Results:
Word counts were variable ranging from 16-774. The most frequent topics selected for reflection were specific learning points linked to the course (13/24) and revelations about inherent characteristics leading to patterns of behaviour that needed to change (‘personal growth’) (6/24). The narratives of 8/24 participants were devoid of emotional content but the range was wide with up to four emotional descriptors in a piece of work. The 6 individuals whose reflection led to personal growth had a higher emotional content (median 2.5, range 1-4) than those who did not (median 1, range 0-3).
The reflections of 16 participants included 32 examples of emotion the most frequent of which were anxiety (n= 7), surprise (n=7) and joy (n=5). Emotions were not invariably conveyed with deliberation, particularly surprise or annoyance. Median word counts were higher for females compared to males (F: 69-774, median 204; M: 16-224; median 107) and the median number of emotions expressed was higher for females (median 2, range 0-4) compared to males (median 1, range 0-2). Female participants were more likely to express surprise (n=6), anxiety (n=5), joy (n=4) compared to males. Male participants were more likely to express positive anticipation (n=3) or anger (n=2) compared to females. The intensity of emotive language use was stronger for females than males.

Discussion:
Our students were not given any guidance on the merits or otherwise of expressing emotions in their reflective work, nonetheless two thirds did so. Although detecting, understanding and managing emotions are important skills, the presence of emotion within a reflective piece did not invariably indicate that these useful processes were taking place or even that the emotion was being conveyed deliberately. Conversely absence of emotion did not preclude a potentially useful critical analysis of past events. Deliberate expression of emotion may have a role in reflective pieces associated with personal growth but this is not the only useful outcome for reflective work. Gender specific differences included the quantity, nature and intensity of emotion expressed. These data raise several questions, about what reflective writing is aiming to achieve and how we develop our teaching.

References:

Ref: 341, Board: A10
Medical Student Learning And Attitudes Towards Adolescent And Young Adult Psychosocial History Taking Workshop: So Far, So Good.

A Baldwin, C, Haines (University of Nottingham), I, Khan (Northampton General Hospital).

University Hospitals of Leicester NHS Trust

Background:
Junior doctors are not equipped to meet the psychosocial health needs of Adolescents and Young Adults (AYA) on graduation, including the skill of psychosocial history taking (1). AYAs are an important group with specific psychosocial health needs and poor outcomes (2,3). Teaching interventions to improve this are new to the UK, and the attitudes of students towards them are not known.

To explore these attitudes to understand these factors and allow for further development of the teaching and pedagogy we have designed a teaching workshop using established simulated patient methods and interviewed the students 4 weeks afterwards to explore their attitudes.

Research Questions:
1. What are the attitudes of medical students towards a teaching workshop for psychosocial history taking from AYAs using the HEEADSSS (4) tool in the setting of an adult acute hospital attachment?
   1b. What factors influence these attitudes?
2. What effect(s) does the teaching workshop have on the rest of their clinical attachment?
   2a their attitudes?
   2b their behaviours?

Methodology:
A qualitative study comprised six students who completed the workshop and interviews, using a Critical Realist worldview approach (5) and thematic analysis (6).

Results:
All students were highly positive towards the workshop, valuing:
• experiences of authentic simulation practice, quality feedback, practice and small group dynamics.
• usefulness of the framework (HEEADSSS), evaluation opportunities, and written feedback.
• learning: they felt empowered and were more aware of the skill and open to using it with patients.

Students were asked about the effect of the communication skills teaching on their subsequent attachment. All students had a positive intention to use the skill in future attachments and practice where they felt they would have more opportunity, as a key barrier was lack of exposure to the patients and time pressure.

Several students reported an improvement in their Social History taking, that they incorporated aspects of the history of HEEADSSS into their usual SH for older patients.

Discussion:
Students were positive towards the workshop, key features that affected that surrounded authentic simulation (7,8), and small groups (9) are consistent with established literature.

The feedback process was highly valued, and stimulated reflection of practice. To develop this further, students were interested in receiving video based feedback. Further work is needed to understand the placing of such teaching within the curriculum to maximise patient exposure.

References:

Ref: 151, Board: A11
Mediculate: Can a team based card game help students to learn vital information and teach each other?
K Williams, R Holman, D Winters, K Furguson, N Jakeman
University of Bristol (Bath Academy)

Background:
Communication skills are a vital part of daily life for doctors and essential for patient safety (1). Each doctor is individually responsible for correct and clear communication with colleagues and they must check that they are understood, “closed loop communication” (2). Games have been shown to be an effective learning tool and improve outcomes in other disciplines (3), they can encourage active learning, problem solving skills and can be used as a form of assessment (4). With the growth of peer assisted learning in medicine shown to benefit students both academically and professionally (5), we felt we could integrate these most easily in a card game. Therefore an innovative adaptable card game, for medical students has been devised by teaching fellows at Bath Academy, to promote timely and accurate communication and improve knowledge.

Methodology:
A card game with key words from various specialities, mapped to the University of Bristol medical curriculum, has been devised. It will be delivered to approximately 25 medical students from years 2 to 5 in March 2016 at Bath Academy. The students will be randomly allocated into small teams with an equal number and mix of year groups allowing transfer of knowledge and revision of past topics. The participants must describe the word on the card to their team mates, getting through as many cards as possible in a minute, they collect all correct cards until the minute is up and then the other team takes a turn until all the pack is finished. Clinical teaching fellows will facilitate the session and provide clarification; however the focus will be on peer-to-peer learning. Following completion of the initial game, students will be encouraged to devise their own words for the game.
A post evaluation questionnaire will be used to evaluate this pilot game. It will use a combination of free text boxes and Likert Scales to evaluate the content and delivery and whether students found it useful and in what way.

Results:
Following completion, the results of the questionnaire will be analysed and content analysis of the free text data performed.

Discussion:
Conclusions will be drawn based on the results and analysis of the questionnaire and quiz. We hope that these may demonstrate that this novel game is an effective learning tool that encourages communication skills and teamwork and enhances knowledge through having to articulate what they know. By involving students from variety of years we should build learning bonds and aspirations for future.

References:
4) Phillips V, Popović Z. More than child’s play: Games have potential learning and assessment tools. The Phi Delta Kappan Vol. 94, No. 2 October 2012, pp. 26-30 Published by: Phi Delta Kappa International

Ref: 325, Board: A12
Transforming end of life care training with hybrid simulation
C Hickson, K Brown, K Tredgett, M Greamspet
Great Western Hospitals NHS Foundation Trust

Background:
A new End of Life (EOL) care strategy is currently being implemented across the Great Western Hospitals NHS Foundation Trust (GWH) in collaboration with primary care. Driving this strategy is national recognition of the need for EOL care which is holistic, personalised and inclusive of the patient and family, to better support the dying [1,2,3]. One of the key interventions was the development of a trust-wide patient-held record, the Treatment Escalation Plan (TEP), where clinicians record patient preferences for EOL care including level of acceptable medical intervention and decisions relating to Cardio-Pulmonary Resuscitation. We conducted an EOL-training-needs survey in which junior doctors identified training in ‘Breaking Bad News’ (BBN) as their greatest educational need. Similarly, the survey identified that the biggest challenge to completing the TEP form was anxiety related to discussing treatment options and resuscitation with relatives. In response we have developed a three-stage hybrid teaching strategy combining interactive teaching, simulation and group work. The aim of the teaching strategy is to enable our junior doctors to approach these difficult conversations with more confidence, which in turn will translate to a better quality of patient care and improved compliance with the TEP document.

Methodology:
Teaching Strategy: 1. Pre-brief with interactive teaching of SPIKES protocol for BBN; 2. Adapted fishbowl simulation of a BBN scenario, learner required to deliver bad news and to discuss patient preferences regarding ceiling of treatment and resuscitation; 3. Debrief including group discussion, reflection and completion of a TEP document. Participants will complete a questionnaire pre- and post-teaching, and at one month follow-up. Five-point Likert rating scales alongside targeted free text questions will assess learner reaction and learning, across a number of domains including self-rated confidence, competency, attitude and reflections on their practice. Competency in communicating bad news will be calculated using SPIKES Competence Short Form, and competency in documentation assessed by audit of TEP forms completed against trust standards. Baseline for competency SPIKES and TEP completion will be estimated based on learners’ self-reported previous exposure to SPIKES training and data from the 2016 GWH TEP Audit.

Results:
Results from the 3-point questionnaires, SPIKES Competence Short Form, and TEP form mini-audit will be analysed and presented.

Discussion:
It is widely accepted that experiential learning and simulation are excellent tools for the acquisition of communication skills [4]. However, recognising that postgraduate medical training is highly variable and that training curricula often lack formal skills training in EOL care communication, it is likely that infrequent simulation exercises alone will not wholly address the various challenges physicians describe in BBN [3,5]. The SPIKES protocol has been widely used in EOL care and its application has been reliably shown to increase the confidence of, and reduce the stress experienced by, physicians when used to facilitate the delivery of bad news [6,7]. Importantly, it provides a definite and supportive structure that is available for clinicians to use in the clinical setting [6,8]. Exploring whether there is any synergistic benefit to incorporating SPIKES training into simulation of a BBN scenario may enable this trust to develop a teaching strategy which is sustainable, learner-led and effective.

References:

Ref: 225, Board: A13
Documentation of blood results by junior doctors
H Freeman, E Parkes
Cardiff and Vale UHB

Background:
Medical records form a permanent account of a patient’s medical care. Junior doctors play a vital role in maintaining patient safety by keeping accurate, legible and timely records of clinical encounters and investigation results. (1)

Methodology:
We performed a fully looped audit to investigate junior doctors’ documentation of blood results on surgical wards in a busy teaching hospital. 100 blood results across two wards were audited in each cycle. We expected all blood tests performed to be documented on the day of the investigation with a time; date; signature; bleep number and a plan based on the results.

Results:
Initial data collected showed that 50% of blood results met our audit standard, with documentation at its poorest during out of hours. 2% of patients came to harm due to lack of documentation. Adherence was 25% amongst the new intake of junior doctors in August, requiring urgent intervention. The results of a survey of F1 doctors showed that the major factor affecting quality of documentation was time constraints and lack of organisation. We developed a consultant-led teaching session aimed at new F1 doctors discussing these issues and highlighting the importance of record keeping and are awaiting the results of a third audit.

Discussion:
This fully looped audit identified significant problems with documentation of blood results amongst junior doctors and we have developed teaching sessions to address the issue. Feedback from the teaching sessions has been positive, and initial data has shown significant improvements in quality of medical documentation amongst the junior doctor cohort.

References:

Ref: 017, Board: A14
Doing the Rounds: The effect of documentation and etiquette teaching on student engagement and attitudes to the daily ward round
J Ford, J Taylor, K Jones
Swindon Academy, The Great Western Hospital

Background:
Being able to document and run an effective ward round is an essential skill for the junior doctor(1) and the daily ward round can be a useful learning environment for undergraduates(2). However, medical students often find the daily ward round to be a daunting process, offering little educational benefit. Reasons cited include time constraints and increased demands for health professionals to maintain accurate documentation, leaving little opportunity for students to contribute(3, 4). We hypothesise that introducing students to the ward round in a structured environment would improve student attitudes to the process, and in turn improve their quality of learning in future ward rounds. We sought to establish how much third year medical students take part in the ward round process and how much they learn from the typical ward round before and after a formal teaching session on ward round documentation and etiquette. This was compared to responses from other University of Bristol Academies where this kind of teaching is not offered.

Methodology:
Prior to the teaching session, questionnaires involving both Likert scale confidence scales and open free text questions were distributed to Bristol medical students at Swindon Academy and other academies. Students were asked how often they attended ward rounds, document consultations and take part in other ways to facilitate a smooth ward round (for example locating patient charts). Students were also asked what factors prevent them from documenting or participating in ward rounds more often, how useful they find the round as an educational experience and whether they would like teaching on ward round documentation and etiquette.
A formal teaching session was then provided to students attached to the Swindon Academy, using videos of simulated ward round consultations to allow the students to practice their documentation in a controlled environment. There was opportunity to ask questions and gain feedback on their documentation skills. An introduction to other aspects of etiquette were discussed. The questionnaire was then repeated after a period of time to see if attitudes had changed.

Results:
In the first cohort of preliminary results, six students from Swindon Academy took part in the pre and post teaching session survey. Five students from other academies took part in the survey at the time of the pre-teaching questionnaire and data is still pending for the follow-up questionnaire. No students had received any prior formal teaching on ward round documentation or etiquette and all students expressed an interest in such teaching. Prior to the session, the students at Swindon Academy admitted to attending an average of just 1-2 ward rounds per week (mean of 1.33 ward rounds/week), with only two students ever documenting in patients’ notes. This was comparable with the students from the other academies that attended ward rounds on average 1.2 times a week with just one student ever writing in the notes. Ten weeks after the teaching session the questionnaire was repeated and there was no improvement in participation rates.
Four of the six students that took part in teaching cited ‘a lack of encouragement from the medical team’ and ‘a lack of confidence in documenting’ as the main barriers for participating more in the ward round process. This was unchanged ten weeks after the teaching session. Evaluation of the ward round as a teaching environment was also unchanged amongst the intervention group, with an average score of 5/10 in both surveys.
The study will be repeated with a further intervention cohort of students in the next few months.

Discussion:
Previous studies have found that the ward rounds can be a useful educational environment. The current student perspective at Bristol University seems to suggest that students do not participate in ward rounds as much as they could do, due to a lack of encouragement and confidence to participate, and a formalised teaching session does not seem to have had any effect on this.

References:
Validation of the INCEPT: a Multisource Feedback Tool for capturing different perspectives on physicians’ professional performance
M van der Meulen, B Boerebach, A Smirnova, S Heeneman, M oude Egbrink, C van der Vleuten, O Arah, M Lombarts
Maastricht University

Background:
An essential element of ongoing healthcare improvement is the evaluation of physicians’ professional performance. The growing interest in physicians’ continuous professional development(1), underscored by society’s concerns about physicians’ performance(2) and the increasing need for transparency in health care(3, 4), have led to calls for systematic evaluation of physician’s professional performance. A strategy often used to evaluate physicians’ performance is multisource feedback (MSF), where physicians gather performance feedback from multiple respondents who are able to observe their behaviour in daily practice.(5, 6) Multisource Feedback (MSF) instruments are used to and must feasibly provide reliable and valid data on physicians’ performance from multiple perspectives. The ‘INViting Co-workers to Evaluate Physicians-Tool’ (INCEPT) evaluates physicians’ performance as perceived by their colleagues, residents and other health care professionals, and was developed to consist of one short generic (not specialty nor respondent specific) questionnaire including 18 specific items, three global ratings and free text comments for narrative feedback. In this study, we report on the validity, reliability and generalizability of the INCEPT to help physicians in their ongoing pursuit of professional development.

Methodology:
The performance of 218 physicians from 26 clinical departments (11 surgical, 15 non-surgical) from 7 non-academic and 2 academic medical centers in the Netherlands, from January 2013 to December 2015, was assessed by 597 peers, 344 residents and 822 co-workers. Using explorative and confirmatory factor analyses, multilevel regression analyses between narrative and numerical feedback, item-total correlations, inter-scale correlations, Cronbach’s α’s and generalizability analyses, the psychometric qualities and feasibility of the INCEPT were investigated. To account for possible meaningful differences in interpretations between respondent groups, all analyses were conducted separately per group.

Results:
For all respondent groups, three factors were identified, although constructed slightly different: ‘professional attitude’, ‘patient-centeredness’ and ‘organization and (self)-management’. Internal consistency was high for all constructs (Cronbach’s alpha ≥ 0.84 and item-total correlations ≥ 0.52). Confirmatory factor analyses indicated acceptable to good fit. Further validity evidence was found by the significant associations between narrative and numerical feedback, physicians who received high total scores also received more positive comments about their performance. For reliable total INCEPT scores, 3 peer, 2 resident and 3 co-worker evaluations were needed; for subscale scores, evaluations of 3 peers, 3 residents and 3-4 co-workers were sufficient.

Discussion:
This study demonstrates that the INCEPT instrument, as evaluated by peers, residents and co-workers, provides reliable and valid information for the evaluation of physicians’ professional performance. The questionnaire revealed an underlying structure of three performance scales ‘professional attitude’, ‘organization and (self)management’ and ‘patient-centeredness’ which was present for all respondent groups, with some items being interpreted differently by the various respondent groups. The INCEPT instrument can be used to provide information relevant to appraisal processes; physicians from different specialties can gather trustworthy performance feedback with only a small number of respondents. The numerical and narrative feedback are well aligned and thus provide a more complete picture of physician’s professional performance than numerical or narrative feedback alone. It should be noted that peers, residents and co-workers perceive or experience aspects of physician performance differently, physicians should be aware of the different item clustering when receiving multisource feedback.

References:

"Diving in with both feet" - Learning dive medicine through simulation.
N Yau, C. Barr, A. Matchett, O.Gokhale, J. Barr, K. Jones
Swindon Academy, University of Bristol

Background:
Simulation provides a safe environment that allows medical students to apply theoretical knowledge to manage acutely ill patients as well as developing non-technical skills. (1-2) Dive Medicine is a new student selected component (SSC) available at Swindon Academy for University of Bristol medical students. Its aim is to allow students to gain insight to a relatively niche but growing speciality, as well as understanding the pathophysiology and management of common diving related illnesses and injuries. As part of the SSC, students were given an opportunity to practice and apply what they had learnt from tutorials into high fidelity simulations. In addition, some students, for their SSC projects, created diving related scenarios which they had a chance to run and lead. The objective of this study was to assess whether the use of simulation would help improve their confidence and consolidate their knowledge of dive medicine.

Methodology:
Ten 3rd and 4th year students were selected for this SSC and participated in 2 days of dive simulation. The sim mannequin was used and allowed us to run the simulation scenarios in different settings (simulations suite and outside). They were asked to complete questionnaires that used semantic differential scales to measure their confidence before and after their simulation sessions. In addition they were asked to reflect on their experience of simulation using free text boxes which followed a reflective framework.

Results:
Analysis with unpaired t-tests showed a statistically significant difference between pre - (mean = 4.70, SD = 1.70) and post simulation (mean = 7.90, SD = 1.45) confidence scores for day 1, t(18)= 4.53, p=0.0003. Similar results were found for day 2 of simulation with pre - (mean = 4.90, SD = 1.85) and post (mean = 7.70, SD = 1.34) confidence scores, t(18) = 3.87, p=0.0011.

Thematic analysis of the free text boxes revealed a few recurring themes:
Simulation was useful in consolidating their knowledge but challenging, especially for those who have no dive experience.
Students felt that by observing, participating and acting as patients in the simulations helped develop their understanding of dive medicine and how to manage a patient who has had a diving related incident.
Having some scenarios occurring outside, by the lake added an element of realism to the simulation
Their confidence in managing an acutely unwell patient had improved after simulation, with particular reference to an ABCD assessment.
Running a simulation allowed students to develop skills such as organisation, leadership and teamwork.

Discussion:
Simulation has allowed students to apply their theoretical knowledge into practice and thus improve their confidence in dealing with diving related illnesses. We also propose that there are potential benefits of students being involved in delivering simulation either through acting as patients or creating and leading a scenario. It gives them an opportunity to develop essential non technical skills such as organisation, leadership and teamwork that may not be readily taught in a lecture or tutorial. We intend to continue to involve students in delivering simulations in next years dive medicine SSC and aim to incorporate this idea into other SSCs.

References:

Ref: 141, Board: B1
“Keep calm and carry on on-call”: Exploring the best model of simulated on-call training for Final Year Medical Students
M Toolan, C Rowden, J Ferguson, A Finlay, N Jakeman
Royal United Hospital, Bath

Background:
Simulated on-call training has been well-documented within the literature as being enjoyable and beneficial for students preparing to start their FY1 year (1) but has not yet been formally adopted into all medical school curricula. Simulation is central to the Department of Health’s (2) ‘Framework for Technology Enhanced Learning’ which supports the integration of simulation into curricula. A BEME systematic review (3) concluded that “high-fidelity medical simulations facilitate learning among trainees when used under the right conditions”. It has been shown to develop the knowledge, skills and attitudes of healthcare professionals without risking patient safety (4). Previously at the Royal United Hospital, Bath simulated on-call teaching has been run using actors in the Simulation Centre in 2014 (5) and as a paper-based exercise on the main hospital wards in 2016. There were benefits and drawbacks to each setting. Simulated on-call using actors was noted to be particularly resource intensive, making formal introduction into the medical curriculum difficult. Meanwhile, paper-based scenarios may less closely emulate the stress of being on-call as there is no simulated patient contact. To our knowledge no previous direct comparison of these two methods has been made. We plan to compare the use of Simulation Centre/actor-based (SAB) sessions with Hospital Ward/ paper-based sessions (HPB) in order to identify if either leads to a greater increase in confidence in dealing with being on-call.

Methodology:
We will recruit 40 final year students from the University of Bristol to take part in simulated on-call teaching while on placement at the Royal United Hospital, Bath. Students will be randomly allocated to one of the two groups as described above (SAB and HPB). Both sessions will begin and end with a simulated handover. Help will be available if required via the bleep system with a facilitator acting as a senior Doctor. We will provide replica medical note paper and drug charts for the Final Year students to use; this will then be reviewed after the session and used as a prompt for debrief. The sessions will last for 90 minutes including feedback and debriefing.

We will conduct short focus groups after each simulated on-call, and will use pre- and post- simulation questionnaires with Likert scales to evaluate confidence among these groups. We will elicit from students whether they feel the teaching session improved their confidence in managing handover, communication (written and verbal), asking for help, task prioritisation and dealing with pressure. We will include a free text box in order to capture further qualitative data.

Results:
We will analyse the questionnaire results and compare individual pre- and post-simulation confidence scores as well as the median scores of each group. We will use the Student’s T-test (unpaired) to determine any statistical significance. We will thematically analyse the qualitative data from the questionnaire and the focus groups and will identify key themes. We aim to determine on an individual and group basis how much of an increase in confidence can be attributed to the teaching and whether there is any difference in this increase between the two groups.

Discussion:
We aim to facilitate the formal adoption of on-call simulation training into medical school curricula by investigating the best setting and form for it to take. We will draw conclusions based on our results.

References:
Dive medicine SSC: Clinical placements
N Yau, O Gokhale, J Barr, K Jones
Swindon Academy, University of Bristol

Background:
The GMC “Tomorrow’s Doctors” states that student selected components (SSC) must be integral to undergraduate medical education. SSCs are intended to allow students to study in depth a topic outside the core curriculum, to develop clinical and research skills and to gain insight into potential career paths (1). As part of a new and unique SSC, Swindon Academy offered year 3 and 4 medical students of Bristol University an opportunity to participate in Dive Medicine. A component of the SSC comprised of a clinical placement in a specialty relevant to diving and physiology and the purpose of this study was to evaluate to what extent these placements helped meet the objectives set by the GMC.

Methodology:
Ten 3rd and 4th year students were selected for this SSC. The 4 week SSC included a week clinical placement in specialties ranging from intensive care, anaesthetics, accident and emergency, cardiology, respiratory medicine and endocrinology. After completing the clinical placements, students were asked to reflect on their experiences with particular focus on the challenges they faced and what they had learnt. Data was collected using free text boxes and was analysed using thematic analysis.

Results:
Students recognised that despite the clinical placements not being based at a specialist diving medicine facility, what they learnt could be applied to the specialty and medicine in general. Themes that emerged from analysing the data collected included improvement in clinical skills and more confidence in communicating with patients, as well as within a team. Students found it valuable getting experience and consolidating practical procedures on the wards that they would be expected to be able to perform when they become junior doctors. Listening, empathy and being able to present succinctly were highlighted as key aspects of communication they developed through their clinical placement and intended to carry onto their future practice. Two students stated the experience reaffirmed their initial interest and that they intend to pursue a career in the specialty that they had clinical placements in.

Discussion:
Clinical placements for the Dive Medicine SSC reinforced and aided development of key skills beyond the scope of the core curriculum. The opportunity to do something “different” and explore a niche specialty prompted students to contemplate their career options and next year we hope to provide a wider range of clinical placements for the students.

References:

H Boyce, A Draycott, D Kelsey, W Robinson, Sherwood Forest Hospitals NHS Foundation Trust

Background:
The Plan-Do-Study-Act (PDSA) cycle is a tool for testing change, particularly in healthcare and service improvement (1). This project demonstrates how the model can also be used to facilitate the introduction and development of a two-part simulated ward round for final year medical students at the University of Nottingham. The need to explicitly educate newly qualified doctors and medical students about the process of a ward round was highlighted by Powell in 2015 (2).

Methodology:
Students undertaking a placement in medicine at King’s Mill Hospital, Mansfield, were given the opportunity to participate in a simulation session to ‘rehearse’ the routine tasks undertaken by junior doctors on a daily basis. Each session consisted of two 1-hour tasks; following a senior doctor on a video of a simulated post take ward round (PTWR) and leading a routine daily review (RDR) of a hospital inpatient. Each task was completed in parallel by two groups of students who then crossed over in the second half of the session.

Results:
The session was run four times between July 2016 and January 2017. Written feedback was obtained about the quality and usefulness of the session along with participants learning points and suggestions for improvements. Cycle 1 – In this phase, students received an email with pre-reading consisting of the Royal College of Physicians (RCP) ‘Principles of best practice’ for medical ward rounds (3) and a “Considerative checklist” for “comprehensive patient review” (4). Suggestions for improvement included better access to resources to complete tasks following the PTWR video. It was also suggested that the pre-reading could have been presented in a more ‘user-friendly’ way.

Cycle 2 – On this occasion students were asked to view a short e-learning package prior to attending the session. This explained the format of the session and distilled the most relevant information the documents provided as pre-reading in stage 1. Additional copies of resources were also made available to participants during the PTWR task. Suggestions for improvements were focused around more individual feedback for participants during the RDR task.

Cycle 3 – The addition of a third faculty member meant that each participant received personalised feedback on their performance during the RDR task. The number of scenarios for the RDR was also increased from 3 to 7, eliminating the need to repeat scenarios. Suggestions for improvements included less patients/more time to complete jobs in the PTWR task with a more structured debrief about how the workload should have been prioritised.

Cycle 4 – A structured introduction giving a summary of the e-learning package was introduced as not participants recommended pre-session reading. The number of videos for the PTWR was reduced from 5 to 4 to allow more time for completion of ‘jobs’ during the task. At the end of the session the whole group was guided through how to prioritise these jobs. A group debrief using the “PEARLS debriefing framework” was also used (5).

Discussion:
The PDSA cycle is a helpful tool for introducing and developing new simulated teaching session. In this case it has facilitated continual improvement of the session in order to meet students learning needs. Quality improvement activity is one of the 6 domains assessed by the General Medical Council (GMC) as part of the 5-yearly revalidation process (6). Applying a healthcare improvement model to education interventions will help those working in medical education evidence their compliance with this requirement of maintaining a licence to practice.

References:
What do students learn from simulation?
M Elsaddig, M, Natarajan, K, Jones
Swindon Academy, University of Bristol

Background:
Simulation is becoming increasingly used in undergraduate education as a tool for teaching clinical and communication scenarios. Studies have assessed simulation as tool for knowledge attainment and skills training through OSCE or written assessments (1, 2). Student satisfaction and perceived confidence were also examined (3, 4). Very few studies have considered what are the perceived learning objectives gained from simulation (5).
In this study we aim to examine the effectiveness of simulation-based education in delivering learning outcomes through students’ perceptions.

Methodology:
All medical students were surveyed following simulations scenarios and asked to state which learning points were achieved from the simulation session and how they influence future practice. This was compared with the learning objectives set by authors of the simulation sessions. We carried out a thematic analysis of the students’ comments. We also compared the achievement of objectives with the level of student and their experience of simulation.

Results:
Data collection is still ongoing. Preliminary data suggest students focus on non-technical skills acquisition. This was perceived more in the more senior group of students, whereas junior students centred around knowledge based objectives.

Discussion:
We hope that this study would demonstrate areas of perceived learning from simulation for students at different stages of their educational journey. This would help in future design of simulations and learning objectives accordingly.

References:

Ref: 432, Board: B5
Development and Assessment of an E-Learning Course on “Cardiovascular Diseases Management” for community pharmacists and other health care professionals

E Pistja, A Themeli
Medical Training Center Santa Maria

Background:
The rising incidence of cardiovascular diseases (CVD) in Albania intensifies the need for effective health education for CVD risk reduction among pharmacists, nurses and other health care practitioners. Therefore, continuing education is critical to improving the performance of these professionals and thus providing better health care services.

Objective
Our goal was to develop an e-learning course on the management of Cardiovascular diseases from community pharmacists, primary care nurses and other healthcare professionals assessing its efficacy, effectiveness, and user satisfaction

Methodology:
An asynchronous e-learning course on Cardiovascular Disease Management for pharmacists and other healthcare professionals was developed and evaluated for its efficacy, effectiveness, and satisfaction.
We performed a stratified randomized controlled trial with these healthcare professionals which have at least 1 year working experience, using pre- and post-knowledge tests, and satisfaction questionnaires. The primary outcome was the improvement in test results (percentage of correct answers), using intention-to-treat and per-protocol analysis.

Results:
A total of 72 participants were assigned to the intervention (22 nurses, 42 pharmacists, 8 public health specialists) with 65 participants in the control group (20 nurses + 39 pharmacists, 6 public health specialists). The intervention was completed by 60 participants (17 nurses+39 pharmacists + 4 public health specialists), with 4 (2 nurses+2 pharmacists) discontinued interventions, and 8 (3 nurses+3 pharmacists + 2 public health specialists) lost to follow-up.
Differences in the primary outcome were found between intervention and control: 21 versus 4 percentage points (pp), P

Discussion:
This e-learning course is effective, especially for community pharmacists and primary care nurses, which highlights the need for continuing education.
Keywords: hypertension, continuing education, distance learning, evaluation studies, community pharmacists

References:

Ref: 148, Board: B6
A systematic review of qualitative research addressing learner and educator perceptions of valuable e-learning in medical education

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Background and purpose
Current understanding of e-learning in medical education is sub-optimal. This study explores and synthesises relevant existing literature to establish what learners and educators consider valuable in e-learning and the extent of convergence in perceptions between the two groups. This is the first systematic review of qualitative studies to explore learner and educator perspectives of e-learning in medical education. A comprehensive search strategy identified qualitative studies exploring perceptions of e-learning in learners and educators in the context of medical education. Framework-based synthesis was used to identify themes across studies.

Methodology
This study adopted a pragmatic, realist approach to systematically reviewing the literature. A comprehensive, pre-defined search strategy was used to identify published qualitative studies exploring perceptions of e-learning in learners and educators in the context of medical education. Qualitative studies were included in this study, along with mixed methods studies with clearly defined and described qualitative methodology and presentation of results. A quality assessment of each of the identified studies was undertaken using a validated checklist. Framework-based synthesis was used to derive themes from data in the identified studies. Data from identified studies were organised and analysed in a structured manner with a priori themes combined with novel themes that emerged from the framework.

Results
Seven articles met the eligibility criteria. Learner attributes, programme design/accessibility, social influences and time were themes relating to learners’ perceptions. Educator attributes, learner attributes, programme design and convenience, social influence, time and impact were themes relating to educators’ perceptions. Study quality was rated as low across all articles.

Discussion and conclusions
There was broad convergence among learners and educators on factors promoting valuable e-learning experiences in the context of medical education, including prior skill, programme design, the role of the facilitator and time. These themes are coherent with those identified in e-learning programmes applied in non-medical contexts. The findings of this systematic review can inform valuable e-learning initiatives which are designed and delivered to meet the needs and expectations of learners and educators.
Surgeons as Brokers? Exploring the professional identity development of surgical educators
J Horsburgh, K Dalrymple, A Cribb, S Donetto
Imperial College London

Background:
An increase in the number of healthcare professionals undertaking postgraduate study in education (Gill et al, 2009) has prompted a number of questions around the professional identity development of these individuals. This study used ‘Communities of Practice’ (Wenger, 1998) as a theoretical framework for exploring the nature of the dual identity of a small group of surgeons who had completed or were currently completing a Master’s in Surgical Education. The theory of communities of practice suggests that learning involves a change in identity and therefore the aim of this study was to illuminate the nature of the dual identity of surgeons whose professional identity could be located within the two communities of practice of surgery and education.

Methodology:
An interpretivist approach was adopted for this study. Five in-depth, semi structured interviews were carried out with both alumni and current students on a MEd in Surgical Education course. The interviews were recorded and transcribed prior to being analysed using open and axial coding (Strauss and Corbin, 1990).

Results:
The interviews revealed changes in participants’ professional identity during and after their Master’s programme, including increased confidence in teaching and adopting a more student centred approach to their practice. All of the participants reported tensions in the way they managed their new and developing identity in education. There were examples of perceived negativity from some colleagues and this appeared to impact on the ways in which participants engaged in both communities of practice. Mitigating factors included seeking out others’ whose professional identity was similar and forming networks with them, ensuring that their participation within surgery was exemplary, and careful consideration of their level of participation within this new (education) community of practice.

Discussion:
Although a small scale study, these findings suggest that moving, or ‘brokering’, between surgery and education was not a straightforward process and one which involved reification and negotiation of a new professional identity. This supports Wenger’s assertion that brokering between communities can bring about new learning and connections, but is also both complex and challenging. Further consideration should be given to the identity development of surgical educators and how they can practice across communities. These findings may also be relevant to educators from other primary disciplines and further research is currently being conducted with participants from a range of other specialties.

References:
Top Tips for GP Teacher Recruitment and Retention
H Alberti
Newcastle University

Background:
General Practitioners have become a fundamental aspect of teaching in modern medical school curricula with 13-14% of undergraduate teaching taking place in primary care in UK1. There are calls for this to increase with the move of more patient care into the community. Capacity for undergraduate General Practice (GP) placements is now a serious challenge for many medical schools with practices facing competing demands from service, and expansion of postgraduate training activity, alongside a reported GP recruitment crisis2. Funding is thought to be a key issue as undergraduate teaching payments have been static for over 10 years and no longer reflect the cost of re-providing service lost from teaching, yet 35% of practices nationally continue to take undergraduate student placements3. Recruitment of an increased number of GP undergraduate teachers is vital and yet little is known of the factors that facilitate or hinder the recruitment and retention of GP teachers.

Methodology:
All Heads of GP Teaching in UK medical schools were emailed the following request: “Please share your 3 top tips for recruiting GPs/GP practices to teach undergraduate students. Please share your 3 top tips for retaining GPs/GP practices to teach undergraduate students.” A reminder email was sent one month later.

Results:
The majority (two thirds) of medical schools responded to the request and their responses were grouped into the following six themes: Firstly, the formation of local networks, building of personal relationships and clear channels of communication were mentioned most often by respondents and seemed to be highly valued. Secondly, respondents felt that formal recognition of both practices and individual GPs was important, particularly with regards to retention of teachers. Thirdly, adequate financial remuneration which could be relied upon from year to year was also deemed an important issue. Fourthly, others mentioned the non-monetary benefits for practices and GPs; such as the enjoyment that can come from teaching, the development of new skills and the potential recruitment opportunities. Fifthly, reducing the burden on practices and GPs and displaying an understanding of existing pressures was considered important. Finally, locum GPs, practice nurses, pharmacists and GP registrars were all mentioned as alternative teachers in the primary care setting.

Discussion:
An understanding of the barriers and facilitators to recruiting more GPs and GP practices to teach medical students is invaluable for many medical schools as they seek to increase the quantity of teaching in primary care. We would suggest medical schools focus on the themes we have highlighted such as open and regular communication to build personal relationships with GP teachers via local and supportive networks; to hold training events for teachers and provide formal recognition of their important role; and to offer fair and consistent financial remuneration. Further exploration through more in-depth qualitative work, of the barriers and facilitators to GPs teaching medical students in the UK, is mandatory, in order to increase the recruitment of GPs teaching in current and future medical school curricula.

References:

Ref: 032, Board: B9
Student experiences of performing service evaluation in Malawi
J Hartland, K Jones
Swindon Academy

Background:
In 2016 a new External Student Selected Component (eSSC) field trip was offered in Swindon Academy, taking eight 4th year Bristol University Medical Students to the Mulanje district of Malawi. The purpose of this field trip was to experience first-hand global health interventions and witness the work of hospitals working in these demanding settings. Malawi is one of the poorest developing world countries and is an example of a low resource healthcare setting which faces a chronic shortage of doctors and other medical staff with an HIV burden of 10-18% and life expectancy of 57/60(1,2,3).

The eSSC took place in Mulanje Mission Hospital (MMH) in the South of Malawi, with a patient population consisting of some of the poorest communities in the country (the Mulanje district). Each student was allocated a service evaluation project chosen by the hospital on services they saw as essential to supporting their patients.

The academy was aware that performing this kind of data collection fell out of the experience of many of the students and had the potential to be extremely emotive. Students were supported by three clinical tutors from Great Western Hospital, who assisted with study designs, practical and pastoral support. This project presents the students' views of this support, and how they feel it could be improved.

Methodology:
An anonymous online survey was performed following the eSSC with currently an 88% response rate. Repeat emails are due to be sent this month to attempt to reach 100% of students. The questionnaire surveyed students’ satisfaction with academic, practical, spiritual and emotional support. It also looked at perceived fulfilment of project and ‘personal’ objectives, allowing for free text responses.

The second half of the questionnaire sought to investigate students experienced v.s. expected barriers to performing service evaluation and difficult scenarios.

Following complete data collection a structured focus group is planned with the 8 students to discuss the anonymous survey results and expand on key thematic points in the free text feedback, and explore areas of potential improvement for providing pastoral and academic support in this setting.

Results:
Results are not yet complete, but currently 100% of respondents rated emotional, academic and project needs as ‘supported’ or ‘very supported’. Only in the category of spiritual support did one student score 3 out of 5. 71% of students felt their difficulties encountered were ‘slightly different to expected’, however none felt they were ‘very different’ indicating the students were adequately prepared.

Current suggested themes from analysis include difficulty accessing notes, unpredictable clinics, shock at levels of poverty and poor internet/electricity supply as significant challenges to the students. Many of the projects planned methodologies changed significantly when faced with these challenges, and adaptability is seen as a trait needed for the students.

Focus group data is not yet available.

Discussion:
So far analysis of student experiences suggests that overall they were well supported in this challenging research environment. Of note many of students felt that performing service evaluation chosen by the hospital significantly improved their commitment and experience of the project. Shock at levels of poverty and difficulty in accessing patient notes appear to have be bigger barriers than expected for students. Whilst this project is still on-going it is the hope of the author that the experiences from this program can be extrapolated by other educational bodies to help support students in similar challenging research fields and promote safe student interaction in global health initiatives.

References:
Surgical skills in Mulanje: Developing and assessing a bespoke teaching package in a low resource setting
J Hartland, C Shakespeare
Swindon Academy

Background:
Malawi is one of the poorest developing world counties and is an example of a low resource setting which faces a chronic shortage of doctors and other medical staff. This shortfall is made up for by clinical officers (COs), who form the backbone of health care provision (1). COs are para-medicals who train for 4 years with variable competencies, however overall there is specific lack of training and experience in surgical skills (1). Literature suggests that a solution to this problem is to promote surgical skills training for COs in district and mission hospitals (1,2). Accordingly, the primary author was tasked with developing a basic surgical skills teaching package for COs of Mulanje Mission Hospital (MMH), Malawi, as part of a 4th year medical student External Student Selected Component field trip.

MMH is a hospital based in the South of Malawi near the base of Mulanje Mountain and works in an extremely isolated environment with some of the poorest communities in the country. Traveling to Malawi the medical student author performed an educational needs assessment to develop and deliver a bespoke basic surgical skills teaching package. Much of the teaching approach was new to the CO and therefore evaluation of the teaching package on confidence and experience was undertaken to see if this was a viable teaching approach.

Methodology:
An initial needs assessment identified the following domains: basic surgical skills (instrument naming & handling, knot tying, suturing principles and suturing techniques) and perineal repair.

Five COs of varying skill level and experience took part in a teaching package involving an interactive group simulation session, overseen by senior clinical officers and surgical trainees from the UK. Non-organic and animal models were used for simulation practice. This included the use of surgical skills boards to practice knot tying and ox tongue to simulate perineal repair.

All participants spoke and read English. The impact of the session was analysed in two different ways:
1. A single best answer test - Given before and after the session with focus on clinical decision making and knowledge of surgical skills techniques and complications
2. Questionnaire – A simplified questionnaire using Likerts scale and ranking of confidence before and after the delivery the session. Blank space questions for learners to suggest improvements/changes.

Results:
Statistical interpretation of all feedback is significantly limited by the small population size. There was a positive trend in pre and post test scores on completion of the course. There was increase in the mean confidence of learners before and after the delivery of teaching in basic surgical skills and simulated perineal repair, especially in ‘instrument naming and handling’.

Whilst positively received it was discovered that learners desire more frequent surgical skills teaching sessions in order to improve and revise skills. Feedback suggests that the learners were not confident in retaining the skills without regular input.

Discussion:
Skills and confidence were improved as a result of the teaching provided. Learner’s written feedback suggested there was an overall appetite for regular surgical skills teaching in the clinical environment and further opportunities to allow for deliberate self-practice. Surgical mentorship schemes facilitating supervised theatre time among trainees and lead surgeons along with improving access to surgical models/textbooks were some of the simple suggestions to improve surgical skills and confidence among COs. Although this study is limited by population size it is reflective of the small, isolated and low resource environment in which this healthcare is delivered. This project does suggest that current surgical skills packages used in the UK could be adapted for employment in low resource settings, but it is consistency and sustainability that staff seek above all in their on-going education.

References:

Ref: 378, Board: B11
"...I didn't realise we're not supposed to like Physician Associates..." A study investigating UK medical students' perceptions of the Physician Associate (PA) role
C McNeilage
University of Leeds

Background:
The physician associate (PA) role originated in the USA in the 1960s and has been gradually introduced to the UK since 2003 working under the direct supervision of doctors. Whilst in the UK they cannot prescribe medication or ionising radiation, some of their tasks, such as diagnosing patients could be perceived to overlap with that of junior doctors. The University of Leeds commenced their Physician Associate studies Postgraduate Diploma course in September 2015 and was one of the first UK medical schools to teach some of the syllabus to their second year medical student cohort alongside the PA students.

The introduction of a new healthcare role can create significant tensions, when the Advanced Nurse Practitioner (ANP) was introduced to primary care, some GPs were concerned that it could threaten their position and pay. The researcher had observed animosity amongst medical students about the PA role during discussions about the junior doctor contract dispute, however there is no published evidence about medical students’ attitudes towards the PA role. As the number of PAs in training is increasing, they are set to be a group that future junior doctors will work closely with.

Methodology:
This research sought to discover initial findings about the views held by medical students’ about the PA role and their readiness to engage with PAs as professionals.

Two focus groups, with a total of twelve participants were conducted with University of Leeds medical students. The first group was made up of second year students who have had lectures and group work with the PA students. In contrast, the second group were fifth year students, who have had no formal exposure to PA students. Focus groups are particularly adept at exploring, “emerging areas on interest” such as this novel piece of research.

Braun and Clarke’s six step method was utilised during thematic analysis and coding in order to provide a rigorous framework for discovering meaning within the data.

Results:
Both focus groups lacked awareness of the PA role. In fact, the second year students’ shared learning experiences with PA students did not lead to the higher levels of role awareness about PAs. Despite being positive about the PA role, they are concerned about the effects, both positive and negative that it may have upon their own careers and upon the safe delivery of care for patients.

Furthermore, the participants expressed concern about the information about PAs that was provided to them by the medical school, which fuelled tensions, as the students viewed it as a, “warning” to treat the PA students with respect. This led to one student saying, “…I didn’t realise we’re not meant to like physician associates...”.

Discussion:
Medical students need greater role awareness in order to facilitate the smooth implementation of the PA role into the NHS. The medical school must ensure sensitive delivery of information in order to avoid alienating medical students who are wary of a new role that is similar to their own.

References:

Ref: 309, Board: C1
A Collaborative peer-paired leadership and management development initiative for junior doctors and NHS managers across Health Education North East and Cumbria

M Elliott
Health Education England North East and Cumbria

Background:
Over the last ten years the NHS has seen a plethora of leadership development initiatives emerge; they include courses, fellowships, development schemes, mentoring, coaching and member organisations such as the Faculty of Medical Leadership and Management. Traditional approaches have been to send the senior trainee off on ‘the leadership and management course’ towards the end of their training, having largely been unable to fit this in due to the favouring by both trainee and trainers of clinical skill acquisition, service delivery requirements, funding constraints and local availability. This leads to junior doctors with aptitude for leadership and management not being developed or valued. There is evidence that Leadership development needs to move away from training the individual. It should be drawn from and embedded in work-based activities that engage all junior doctors, is system-wide and linked to development of the organisation (McKimm, 2011, Swanwick and McKimm, 2011). Based on the London NHS leadership academy leadership toolkit pioneered by Dr Robert Klaber I aim to set up a collaborative peer-paired leadership development scheme between junior doctors and non-physician managers, across HEE NE (Health Education England North East and Cumbria). The aim of the project is to improve knowledge and develop skills that enable junior doctors to be more prepared for leadership and management roles, whilst increasing engagement and improving relationships and the perceived cultural divide between doctors and managers (Schoenheimer.H, 2014, Klaber.R, 2012).

Methodology:
This will involve the recruitment of 30 managers and doctors who will participate in planned shadowing, conversations and facilitated workshops based on key leadership themes. Formal evaluation will be through pre and post intervention preparedness to lead questionnaires and semi-structured interviews based on the healthcare leadership model. The project has taken four months to get to the recruitment phase and is running between February 2017 and July 2017.

Results:
I will discuss how we are using the health care leadership toolkit to develop an experiential leadership programme for junior doctors working for HEE NE. Initial results from pre-programme preparedness to lead questionnaires will allow me to critically evaluate the difference between junior doctors and nhs managers preparedness to take up leadership roles and summarise how the programme develops distributed leadership for individuals and the organisation. I will discuss the challenges of setting up a region wide collaborative leadership development programme between HEE NE and its affiliated health care trusts. In particular the recruiting of trainees and NHS managers and the complexities of the the NHS infrastructure and various trust management hierarchies.

Discussion:
This is the first paired leadership programmes to be rolled out across a region for junior doctors and NHS managers. It is flexible, high impact but low cost and takes a new approach to the leadership development of junior doctors. Focusing more on experiential learning and the goals of the NHS, providing a leadership context. The relationships forged from this project will increase engagement within the trusts but also across organisations. This will impact on changing the leadership culture from heirarchial to distributive and shared. promoting the new vision of the NHS and improving patient quality of care.

References:

MCKIMM, J. 2011. leadership: what are we trying to achieve. The Clinical Teacher, 8, 181-185.


Appreciating your colleagues: Inter-professional simulation to improve nursing and medical student teamwork
J Hartland, L Whatley, L Evans
Swindon Academy

Background:
Swindon Academy and Oxford Brookes Nursing School have for the past two years run inter-professional simulation sessions on caring for the acutely unwell patient. Modern healthcare is centred on the multi-disciplinary team and improved patient safety and care relies on good communication within the work place (1, 2). Despite this the majority of acute care simulation in undergraduate programs is done in a uni-disciplinary environment.
Expanding on a pilot poster presented at ASME 2016 this project continues to look at students self reported changes in confidence. Additionally this year thematic exploration of students’ understanding of roles within a multidisciplinary team has also been explored.

Methodology:
Following acute care simulation across the academic year 2016-2017 approximately 80 Medical students and 200 nursing students are planned to be anonymously surveyed as part of planned feedback to improve the quality of teaching we provide between our two different schools. Online Likerts scale measured pre and post simulation confidence in medical management, communication and understanding of roles within an MDT. Free text boxes allowed students to express independent thoughts about the sessions.
The comments from these will be thematically analysed to uncover recurrent learning points along with exploration of potential barriers to learning in this environment.

Results:
Results are not yet available for this year. Data gathering is expected to finish in May 2017, at which point results will be analysed and amalgamated. Paired student T-tests will be used to look for statistically significant improvements in pre and post scores, as well as thematic analysis of the free-text feedback.

Discussion:
Results are not yet available to draw conclusions from. Previous years smaller pilot data has suggested that confidence is significantly improved in all surveyed domains, however understanding of the MDT role has not previously been explored. Preliminary data suggest that both student nurses and medical students find the MDT simulations very beneficial, citing improvements in inter-professional communication and confidence in interacting with other specialities. The authors suggest that by improving these domains these students will go onto work more effectively at a junior level post-qualification and improve the care and management of acutely unwell patients.

References:
Inter-Professional Education

Exploring the effectiveness of prescribing error feedback in an acute hospital setting
M Lloyd, S Watmough, S O’Brien, K Hardy, N Furlong
St. Helens and Knowsley NHS Teaching Hospitals

Background:
Prescribing errors (PEs) are problematic within healthcare creating workflow inefficiencies and potentially compromising patient safety. Various strategies have been employed in an attempt to reduce error rates yet PEs remain a concern. Feedback has been proposed as one potential intervention with prescribers welcoming PE feedback but evidence in its use and application for prescribing in hospital settings is limited. The purpose of this study was to determine the impact of a pharmacist-led constructive feedback on prescribing error rates in a hospital setting.

Methodology:
Baseline PE data was collected prospectively over a five day period on sixteen wards in a UK hospital. Wards were assigned into control and intervention groups with 41 prescribers on control wards and 37 prescribers on intervention wards. All prescriber grades were included. Prescribers in the intervention group received written and verbal feedback on their prescribing from ward pharmacists including error rates, stage of prescription, severity and examples of both good and suboptimal prescribing. This was followed by further feedback on any PE intercepted and classified as significant or above. Pharmacists working on the intervention wards were trained in the principles of effective feedback. This was to ensure timely delivery of constructive feedback that facilitated reflection, encouraged identification of error causation and was actionable. PE data collection was repeated following three months of the intervention. Data were analysed using chi-squared, Spearman’s rank and independent t-tests.

Results:
For the intervention group, there was a mean increase of 23.7% (95% CI, 15.6 to 31.8, SD 24.00) in error free prescriptions, compared to a 5.8% reduction (95% CI, -14.4 to 2.9, SD 27.4) in the control group, a statistically significant difference of 29.5% (95% CI, 17.7 to 41.2, SD 5.9), t(75) = 4.978, p = 0.005. Effect size (d) = 1.14. Overall PE rates were statistically significantly lower in the intervention group (mean change of -18.3%) compared to the control group (mean change of +5.5%) with a mean difference of 23.8% (SD 3.5, 95% CI, -30.6 to -16.8), t(75) = -6.849, p

Discussion:
Audit and feedback, combined with on-going feedback on significant PEs, produces statistically significant reductions in PE rates with PE feedback now part of routine clinical practice in the study hospital. These results are consistent with empirical evidence and show promise for wider application in hospital settings where clinical pharmacists can be utilised as facilitators of PE feedback. Further work is necessary to determine the most effective method of feedback alone and in combination with other PE reduction strategies. Additionally, exploring the impact of feedback on prescribing behaviour could highlight why feedback works to inform prescribing pedagogy and feedback delivery further.

References:
5. Ramani S, Krackov SK. Twelve tips for giving feedback effectively in the clinical environment. Medical teacher 2012; 34: 787–791

Ref: 040, Board: C4
From diagnosis to death – An observational study of inter-professional palliative care simulation
J Hartland, L Evans, L Whatley
Swindon Academy

Background:
Effective palliative care is designed to be delivered in a multi-disciplinary team setting(1) and undergraduate teaching should reflect this best practice. Swindon Academy and Oxford Brookes Nursing School have for the past two years run inter-professional simulation sessions and last year piloted an innovative project looking at teaching End of Life care to under-graduates through simulation.
The pilot data showed this to be a potentially effective method of teaching and was presented at ASME 2016 under the title “From Diagnosis to Death”. This academic year, following the positive reception of the pilot, the project has been expanded into a daylong workshop on care for patients approaching the end of their lives. Using an observational study our team posed the question ‘Does undergraduate inter-professional simulation in palliative care promote positive changes in team working, understanding and behaviour when caring for patients nearing the end of their life?’

Methodology:
The session consists of 4 simulations focused around 6 months of a patient’s journey from diagnosis of a terminal cancer to death, interspersed with tutorials on palliative care and student led debriefings on the simulations. Approximately 30 medical students and 25 nursing students are expected to participate in the study.
This project is currently awaiting expedited ethical approval. Data collection will take on two formats:
1. Qualitative and quantitative feedback via online questionnaire – an anonymous online questionnaire completed at the end of the day with Likert scales and open space questions regarding the student’s experience of the simulations and teaching.
2. Observational analysis – Within all four debriefs there will be two observers who will not confer about their results, and will take written feedback on themes and salient points elicited by the students with focus on changes in attitudes and behaviour. One observer will be a Nurse Educator and one will be Doctor in the role of Clinical Teaching Fellow to overcome uni-disciplinary bias. There will be no electronic recording of data and all notes on students will be anonymised. Students will be aware of the observers’ role and intentions. Debriefs will be facilitated by a separate member of staff and led by the students.

Results:
The results are not yet available but the study will be completed by June 2017. In total 6 sessions will be analysed, with a total of 24 individual simulation debriefs. The results from both observers will be amalgamated to produce a multi-disciplinary analysis of students self perceived behavioural changes following the inter-professional end of life simulation.

Discussion:
It is the authors’ hope that this study will continue to show positive and significant changes in confidence addressing the needs of a patient nearing the end of their life. Observational analysis of student led debriefs should show the salient learning points and self perceived short-term behavioural changes when approaching a patient nearing the end of their life. Failing this the discussion will focus on why this may have not occurred and suggestions for further development.

References:

Ref: 386, Board: CS
Getting Underfoot or Being Given a leg up: Ward Staff’s perceptions of medical students and how they see their part in Education.
KM Williams, R Holman, D Winters, K Furguson, N Jakeman
University of Bristol, (Bath Academy)

Background:
Guidance from the GMC encourages medical students to have clinical experience throughout all years of medical school (1). Although there has been research into how clinical contact time benefits their education (2), we wanted to find out how it impacts the other staff on the wards, as more and more students need accommodating. All members of the multidisciplinary team are essential for different parts of patient care and effective teamwork leads to better patient outcomes (3). Although the Royal United Hospital (RUH) is generally considered a friendly hospital even here there are instances where medical students and other staff lock horns. There is some evidence in the literature especially within the doctor-nurse interaction, to show there can be lack of understanding and even animosity (4). This study aims to look at what the nursing staff and allied health professionals understand about each level of medical education (ward work and ward based exams), how medical students are a help or hindrance to ward work and what they feel they can offer to ward based students.

Methodology:
Data will be collected in the form of a questionnaire delivered to nursing staff and allied health professionals (AHP) i.e. physiotherapists, occupational therapists, dietitians, and specialist nurses. The questionnaire will be directed to staff on wards used most frequently by our medical student’s namely Medical Short Stay, Medical Assessment Unit, Surgical Assessment unit and the main surgical ward Pulteney. The themes of the questions are what they think a medical student in each year would be expected to know, why they are on the wards, where there are problems/solutions with integrating students into the ward and how the staff can share their own knowledge best.

Results:
Final results will be presented at the conference following closure of the survey in March. Descriptive statistics will be used on quantitative data and thematic analysis will be done on open questions.

Discussion:
This study is expected to show how AHP view their role in medical student education, and find suggestions for how we can overcome any current obstacles. Given anecdotal evidence from students so far we do expect there to be some mismatch between what staff understand about the needs and abilities of different levels of students, however we would also expect to find more effective methods of ensuring a positive relationship between medical students and AHP during clinical placements.

References:
(2) Illing, J. et al. 2008. How prepared are medical graduates to begin practice? A comparison of three diverse UK medical schools. GMC
(3) Epstein N, Multidisciplinary in-hospital teams improve patient outcomes: A review
Identifying community educational needs through a CKD3 email advisory service

Imperial College London

Background:
The NICE UK Chronic Kidney Disease (CKD) guidelines state that patients with stable stage 3 CKD should be managed in primary care, with appropriate referral to secondary care services if renal function declines (1). This is part of a wider shift in service configuration promoting increased community care as part of the NHS Five Year Forward View (2). It is therefore important that community providers are empowered and have the educational knowledge and resources from which to provide this care.

Using our email advice service between Nephrologists and General Practitioners in North West London, we aimed to determine the nature of advice sought by general practitioners, to identify learning needs of healthcare professionals in the community.

Methodology:
A retrospective audit of all emails received by the e-advice service was carried out for the period January 2016 – November 2016 inclusive. Initial themes were identified. Questions were then coded and themes from all emails amalgamated, allowing the following master themes to be identified: blood pressure control, risk factor modification, radiology, prescribing, general medical advice, management of declining renal function, referral triggers and other. The master themes were then cross referenced and evidenced in the majority of email responses. The advice category and referral outcomes were also recorded for each email inquiry.

Results:
A total of 107 individual email inquiries were received during this period. 70% of enquiries included information regarding patient renal function (either eGFR or creatinine). The most common categories of requested advice were referral triggers (18.9%), predominantly based on individual patient history and blood results, and prescribing (18.9%). This was followed by advice on management of declining renal function (18.2%), blood pressure control (16.7%) and general medical advice (15.9%). Radiology advice (6.8%), risk factor modification (2.3%) and other inquiries (2.3%) were the least frequently requested categories. A similar trend was observed in response themes, although greater emphasis regarding advice on blood pressure control (21.2%) compared to prescribing (17.9%).

Discussion:
In this audit of inquiries to our CKD e-advice service, we identified uncertainties around referral criteria, prescribing and blood pressure control to be the major challenges facing general practitioners providing care to patients with CKD. This is consistent with previous study findings (3). These enquiries were often prompted by recent changes in patient parameters, most commonly rising blood pressure and/or declining renal function, suggesting that education on interpretation and management of these quantitative changes would be of benefit. We believe that developing a programme for interprofessional postgraduate learners, relevant to their practice and developed from their specific learning needs will aid learning and improve care in the community, a key component of the five year forward view (2). Moreover, integration of educational resources into computer technology that can draw attention to declining patient parameters may provide a further tool to facilitate community care. Analysis of an e-advice service is an innovative method for identifying local educational needs. Regular reaudit will enable us to be responsive and adapt our learning materials, when local educational needs change.

References:
Inter-professional simulation training - a foundation for better practice
L Salm, S Ravindran, C Vaughn, H Harb, S John, V Dimmock
Homerton University Hospital

Background:
Breakdown of human factor principles are closely correlated with the occurrence of medical errors (1,2). Delivering human factors based team training in recent years has enhanced patient safety through improved team-working (3). The benefits of multidisciplinary learning and simulation has been well recognised within the sphere of medical education (4). When compared to unidirectional learning, inter-professional simulation is associated with improved self-reported teamwork and communication (5).
Many simulation centres in North East London have a siloed approach to foundation doctor human factors simulation training. However, at the Homerton Simulation Centre, we have adopted an inter-professional approach with the aim of enhancing awareness and improvement of human factors training within a multidisciplinary team (MDT) consisting of Foundation Year One (FY1) and Two (FY2) doctors and nurses.

Methodology:
Homerton’s inter-professional simulation team delivered 10 one-day high fidelity simulation sessions to an equal combination of Foundation trainees and nurses, from various disciplines. Each ‘Foundations in Clinical Practice and Human Factors Training Day’ incorporated a didactic session on human factors followed by six simulation scenarios mapped to the Foundation Curriculum and incorporating Nursing and Midwifery Council standards of practice. Multidisciplinary simulation fellows and practice development nurses delivered and debriefed all sessions in rotating pairs. All debriefs focused on human factors contributing to scenario progression and outcome. Each participant was invited to complete pre and post-course online questionnaires, receiving an attendance certificate subsequently. Questionnaires were developed from a recent 10-year review of course evaluations by experts in medical education within the region. They were designed to capture more robust data on non-technical skills and multidisciplinary working. Quantitative and qualitative data was captured through free text questions and Likert scale responses. Emergent coding thematic analysis was employed to generate overarching themes from free text responses.

Results:
88 participants completed the programme, with 69 (78%) completing both pre and post-course questionnaires. These participants included 20 nurses (29%), 26 FY1’s (38%), and 23 FY2’s (33%). Self-set pre-course learning objectives centred around technical skills acquisition, application to the management of acutely unwell patients and increased self-confidence. However, self-reported post-course learning outcomes placed a far greater emphasis on the importance of non-technical skills, with the dominant themes being leadership, teamwork and communication. This highlighted the importance of enhanced cognitive ergonomics, including cognitive aids and bandwidth limitation. The majority of respondents placed significant value on the inter-professional learning (IPL) approach, with 97% stating they ‘agreed’ or ‘strongly agreed’ training with a different professional group improved learning. Furthermore 96% stated they ‘agreed’ or ‘strongly agreed’ the course will enhance MDT working in current or future teams. They cited the realism and mimicking of working practice, enhanced IPL opportunities and a better understanding of team member roles as important factors to enhanced MDT practice.

Discussion:
The multidisciplinary approach to human factors simulation training has clear added benefit to both foundation trainees and nurses. Feedback highlights the importance of IPL in promoting development of non-technical skills. This approach appears to be more meaningful when compared to previous siloed simulation experience. Furthermore, the MDT involvement in scenarios and debriefs also appears to enhance participants’ stated current and future clinical practice. The results of this evaluation will be presented to other simulation stakeholders in North East London, with a view to advocating this method to other centres in the coming academic year.

References:

Ref: 343, Board: C8
Point of Care (POC) Simulation Training for Operating Department Practitioners (ODPs)
N Yau, A Greatorex, O Gokhale, N Stafford, M Htyn, M Greamspet, M Natarajan
Swindon Academy, University of Bristol

Background:
Being under anaesthesia is a critical period where patients require a high standard of observation until recovery is complete. With theatres considered as a high risk environment for potentially life threatening adverse events; appropriate resources, and prompt intervention by trained staff in theatres is vital to ensure a safe outcome for patients (1).
Numerous studies have implicated human factors, such as teamwork or situational awareness, as the major cause of critical incidents in theatre recovery (2). High-fidelity simulation has been proven as an effective way of providing participants a safe and structured learning environment in which to develop these non-technical skills. This is particularly relevant for ODP staff as they need to be able to respond and manage rare but serious, complex or crisis situations (3).
POC simulation for ODPs were first introduced in 2015 at Great Western Hospital with results showing improved confidence in managing acute clinical conditions. This study is to assess whether this improved confidence has translated into an improvement in team performance when managing emergency scenarios.

Methodology:
Multiple POC simulations for ODPs will run throughout the year with scenarios ranging from (but not exhaustive) laryngospasm, anaphylaxis and post op haemorrhage.
The simulations will be delivered using a sim mannequin in theatre recovery, by a team of anaesthetists and clinical teaching fellows trained in simulation and debriefing.
An independent observer will be asked to rate the participants non-technical performance using Anaesthetists’ non technical skills (ANTS), a reliable and valid tool that captures comprehensively the quality of team working and team interaction. An ANTS score will be given after each scenario and the scores will be statistically analysed to see if there was an improvement through the year. The debrief will include feedback on both relevant clinical and non-clinical skills, and will encourage participants to set themselves action learning points. They will also be asked to complete a pre and post simulation questionnaire using likert scales, and will be given an opportunity for reflection by using free text boxes.

Results:
Findings from pre and post questionnaires will be presented in full and the scoring from ANTS will be statistically analysed. Reflections will undergo thematic analysis.

Discussion:
Patient safety has become a key focus over the past decade. However, more could be done to improve patient care and outcome, especially in a theatre environment. Simulation has been proven to be an effective way of improving clinical and non-clinical skills, and therefore it could be beneficial embedding simulation into clinical training and practice for ODPs.

References:

Ref: 145, Board: C9
Setting up a programme to teach intimate examination as part of a governance strategy for NHS Trusts delivered by “lay experts”

J Taylor, K Jones
Swindon Academy

Background:
Clinical Teaching Associates (CTAs) are lay men & women who are specifically trained to teach intimate examination, including male genital & rectal examination as well as female pelvic & breast examinations (1, 2). Previously CTAs have been used to teach undergraduate medical students, but in Swindon Academy we have extended their role to teaching Healthcare Assistants (HCA) who act as chaperones in gynaecology, sexual health, breast, urology or general surgical clinics. Although HCA’s receive no formal training for their role as Chaperone they are the main group of staff who patients rely on to act as independent observers of professional behaviour during intimate examinations. They are also the main group of staff the medical profession relies on to act as witnesses of their conduct during intimate examinations. CTA teaching encompasses the communication, consultation and practical skills that students must learn to perform intimate examinations. As the CTA teaching is from a ‘non-medical’ perspective students are given very detailed feedback regarding their performance from a lay perspective. This enables us to concurrently train HCAs as chaperones to observe what best practice looks like so their focus is on the areas that are most important to the patient.

Methodology:
We will provide a step by step guide to establishing a male & female CTA programme. This will include managing the Medical Undergraduate Tariff (MUT: formally SIFT) budget, recruitment & training of CTA’s, the logistics of delivering the teaching and collecting feedback. We will demonstrate how a programme like this can underpin governance and patient safety strategies for NHS Trusts by improving students & staff education.

Results:
We will present the results of our pilot study regarding chaperone training for HCAs including an exploration the different clinical areas they work in. The success of chaperone training will be evaluated by a comparison of their self-reported knowledge of the examination before and after the CTA teaching and their confidence in acting as a chaperone.

Discussion:
The authors propose that this unique educational programme can benefit NHS Trusts and most importantly their patients. This is achieved through improving governance and embedding the programme in the organisation’s safeguarding strategy. It also delivers formal training and continuing professional development to a group of staff working in clinical settings who previously received no formal training.

References:
1. Use of gynaecology teaching models in the US. Louis B, Jacques MD. 16 Dec 2003 www.bmj.com

Ref: 507, Board: C10
Inter-Professional Education

Student experiences and staff perceptions of the primary care placement in the Physician Associate programme at a UK Medical School.

R Hoggins, W Scott-Smith, M Okorie, J Price
Brighton & Sussex Medical School

Background:
Primary care is facing increasing demand and therefore an increased workforce burden (1). Despite this, the number of junior doctors choosing to become general practitioners (GPs) is not commensurate (2). These challenges have identified the need for more appropriate working practices, and have led to the introduction of mid-level professionals known as Physician Associates (PAs).

PAs are a relatively new form of health professional in the UK, with the first UK PA educational program introduced in 2004 (3). Their role is to deliver holistic care; taking histories and performing examinations, diagnosing conditions, and requesting and analysing investigations (4). However they do not currently have prescribing rights in the UK, unlike in the USA (4,5). Although PAs work under the supervision of doctors, there is evidence that suggests that patient outcomes in those seen by PAs are similar to those seen by doctors (6). Whilst there has been a great deal of research into the training, collaborative working and impact of PAs in the USA, there is currently a dearth of data around this in the UK.

In 2016-17, the Brighton and Sussex Medical School (BSMS) took on its first cohort of PA students. Since a large proportion of the PA students will be employed in primary care and the first year of the PA students' educational programme is based in primary care, the research project is focused on this aspect of their education.

We anticipate that that we will gain an insight into the experiences and perceptions of PA students and primary care staff involved in the educational placement programme; contributing to improving the functioning of PAs working in primary care in the NHS.

Methodology:
This qualitative study employed two methods. One method involved analysing data from two focus groups of 4 or 5 PA students each and the second method involved analysing data from 1:1 semi-structured interviews with all 9 PA students in the cohort and 10-15 primary care staff. The latter was purposively sampled from all participating practices to include a variety of different health professionals and administrative staff. We have adopted an interpretive phenomenological approach.

Discussions focussed on:
PA students
1. Participants' experiences of the primary care educational placement programme at BSMS;
2. Participants' perceptions of their future role in healthcare delivery in primary care in the NHS.

Primary care staff
1. Participants' perceptions of the PA primary care educational placement programme at BSMS;
2. Participants' understanding around the role and skills of PAs in primary care.

Thematic Analysis, independently triangulated by the research team, was used to analyse the data from the interviews and focus groups, and validated through theoretical saturation across all participants. A ‘Framework’ analytical approach was adopted to assist data interpretation (7).

Results:
Results from the qualitative analysis of focus groups and interviews will be presented.

Discussion:
We present the experiences and perceptions of PA students and primary care staff around the new Physician Associate primary care educational programme at BSMS. We have highlighted the differences between staff and students’ perceptions locally and the differences in perceptions in comparison to previous research in the USA. Our findings will help support the development of future PA educational programmes in the UK and further define the role of PAs in primary care in the NHS.

References:

Ref: 484, Board: C11
Paper withdrawn
The readiness of second year medical students towards interprofessional learning before and after their second clinical attachment
L Ghani, A Chu, EH Muir and A-M Salmasi
Imperial College London

Background:
‘Foundations for Care’ is a module designed in 2015 for second year medical students, integrating holistic patient care and multidisciplinary team learning into the second clinical attachment. There is uncertainty in the literature about the optimum time to introduce multidisciplinary team learning to healthcare students (1-3).
We aim to measure if there is change to second year medical students’ attitude to interprofessional learning during their three-week clinical attachment in hospital.

Methodology:
Readiness for Interprofessional Learning Scale (RIPLS) is a validated, questionnaire, which assesses the readiness of undergraduate healthcare students to engage in interprofessional learning (4-7). Students voluntarily participated to complete RIPLS pre and post module.
The RIPLS questionnaire consists of 19 questions and four subscales; 1) Teamwork and Collaboration; 2) Negative Professional Identity; 3) Positive Professional Identity and 4) Roles and Responsibilities. RIPLS has a 5-point Likert scale ranging from one (strongly disagree) to five (strongly agree) with some reverse-scored items. High scores on the RIPLS indicate good readiness for interprofessional learning. The mean scores before and after the module were calculated.

Results:
Data was collected from 179/333 students pre module and 58/333 students post module. 12% (22/179) students had previous experience of interprofessional learning. The two common interprofessional experiences were: work experience shadowing prior to medical school and working in the hospital as a healthcare assistant/volunteer.
Mean scores were low for negative professional identity which relates to negative statements regarding the value of working with other healthcare professionals. This shows that the students disagreed with the statements, therefore indicating high readiness for interprofessional learning which was maintained post module.
There were high scores pre and post module for the subscales; teamwork and collaboration (evaluating attitude regarding the effect of cooperative learning with other professionals) and positive professional identity (relating to shared learning experiences with other healthcare professionals). The high scores infer that the students agreed with these attitudes and valued shared learning experiences.
Finally, only one change in scores post module was observed, which related to the students own role under the subscale roles and responsibilities implying that they gained a clear perception of their own roles and others after the module.

Discussion:
Our results show that the second year medical students started the module with high hopes and expectations of multidisciplinary learning and that this was sustained after the module. Furthermore the students had more clarity regarding their role after the module possibly due to exposure to the multiprofessional environment in the hospital. Although the respondents may have been self-selecting our data indicates that, early in their training, our students have a positive attitude towards collaborating between professionals. This represents an opportunity for more interprofessional learning strategies in the early years. A longitudinal study will be required to assess whether this attitude is sustained throughout their training.

References:
There is no I in Team: using interprofessional team based simulation to teach students about medical error.

I Swart-Wilson, D Morton, L Crossland, H Chant, R Sheppeard, M Brown, A McDermott, P Sykes, A Samuels, C Rodd, P Davies

Gloucester Academy, University of Bristol

Background:
It is estimated that 850,000 patients a year in England are harmed, or nearly harmed, by their hospital care with approximately half of these incidents being recognized as preventable (1). This has led to a national strategy to reduce medical error and improve patient safety.
The World Health Organisation has recognised the need for patient safety education for all healthcare professionals in training (2). Effective communication and teamwork is critically important in delivering safe patient care and medical error prevention (3). Interprofessional education and collaboration can provide an excellent platform to train future healthcare professionals to work effectively within clinical teams (4,5).
The aim of this project is to investigate whether students from multiple disciplines can be taught effectively about medical error through team based interprofessional simulation.

Methodology:
Ethical approval has been granted for this project.
Pre-registration pharmacists, nursing and medical students were invited to take part in this project from December 2016 – March 2017.
Uni-professional focus groups were used to identify prior experiences, attitudes and understanding of medical error and interprofessional simulation.
The outcomes of which were used to guide the content and structure of an interprofessional simulation afternoon, as well as a pre and post session questionnaire.
Pre and post intervention data will undergo thematic and statistical analysis.

Results:
Full results will be available for presentation.

Discussion:
There is extensive evidence in support of simulation-based interprofessional education and its importance for all healthcare professionals (6,7,8).
Studies have identified improved patient outcomes, perceived clinical competence, enhanced communication skills and increased team working ability (9). By combining education on medical error with interprofessional simulation, it is hoped that students will gain knowledge, insight and experience in this important field.

References:
Why develop an insitu inter-professional simulation training programme for the management of medical emergencies on the dialysis unit, in both the hospital and community units.

K Watson, A Rankin, A Moran, O Keane, C Mainwaring, T Sanctuary, S Calvert, T Lasoye
Kings College Hospital NHS Foundation Trust

Background:
The dialysis unit is a place where medical emergencies are not an infrequent occurrence. The demand for haemodialysis is increasing, as is the average age and co-morbidity of the dialysis patient(1). This has resulted in patients who were once the reserve for in-centre hospital dialysis now having their treatments in the community. Staff training needs to be provided to meet these changes(2). The dialysis unit is unfamiliar to many medical health care teams, and a greater level of anxiety is expressed about attending emergencies on the unit. The skills exist within the multidisciplinary team but sharing of these skills is lacking(3). Community dialysis units are nurse led and have less resources available. The community team report being unconfident in managing the unwell dialysis patient and the lack of resources are underappreciated by the accepting clinician in secondary care. This combination leads to a high number of referrals to secondary care which are deemed unnecessary(4). This inter-professional team training is aimed to improve the confidence of the health care team in the management of medical emergencies on the dialysis unit. It will encourage learning and appreciation of the different skills of the health care team and an understanding of the resources available at the different settings. This programme aims to develop a more cohesive team between primary and secondary care, and reduce the number of referrals deemed unnecessary.

Methodology:
The inter-professional insitu training simulation will run monthly on the main dialysis unit and monthly at one of the satellite dialysis units for 90mins, using a medium fidelity manikin with a needleable fistula attached to a working dialysis machine. The scenarios will include medical emergencies such as anaphylaxis, fistula bleed, air embolus and cardiac arrest and will be debriefed according to the diamond model. The course will be evaluated through a pre and post course questionnaire and with a repeat survey three months following assessing confidence in managing medical emergencies, attitudes towards multidisciplinary working, perception of how easy it is to refer to a member of the multidisciplinary team and familiarity with the environment of the dialysis unit. The number of incident reports made and quality improvement projects generated will be recorded and taken as markers of good patient care; as well as the number of serious adverse incidents and referrals deemed inappropriate. This can be compared as long term data pre and post implementation of the programme.

Results:
The project design and implementation strategy will be presented along with preliminary results.

Discussion:
This has been designed as a patient safety development project. Through this multidisciplinary project we are aiming to improve the skills in managing a medical emergency on the dialysis unit, improve knowledge of the mix skills of the inter-professional team and appreciation of the resources available in the hospital and community dialysis centres. We anticipate that this will lead to a reduction in the number of referrals deemed inappropriate from the community units, by increasing the skills of the dialysis team and the clinician’s understanding of the resources available in the community. We anticipate that the training will decrease the number of serious adverse incidents and generate quality improvement projects that can assist in streamlining the patients’ care from the community to secondary care setting

References:

Ref: 385, Board: C15
**What can healthcare students learn from community members’ involvement in the design and delivery of a health promotion event?**

K Stevenson, S Regan de Bere, S Nunn, E Catchpole, R Ayres, S Stevens
Peninsula College of Medicine and Dentistry

**Background:**
Global health strategies have driven an increasing emphasis on healthcare students learning within the community. Internationally, community-engaged medical education (CEME) aims to empower communities in the design, conduct and/or evaluation of educational activities which should address both students’ learning outcomes and the community’s health needs 1. CEME is particularly important within disadvantaged communities where health inequalities require addressing. To involve local communities, academic healthcare programmes should demonstrate strategies to embed patient and public involvement (PPI) in their curricula 2. The aim of this study was to determine what healthcare students could learn from working with the public to design and deliver a local CEME event.

**Methodology:**
This was an action research project which explored the learning value of the partnership between Plymouth University (PU) healthcare students and community leaders from Barne Barton, a Plymouth community with a high index of deprivation 3. The Barne Barton community leaders, acting as PPI partners, worked alongside the healthcare students to co-design and co-deliver a community-engaged health promotion event during the academic year 2015/2016.

Qualitative methods were adopted to enable in-depth analyses of the students’ experiences and reflections. Reflective diaries, observational field footage and focus groups were used to gather primary data from sixteen PU healthcare students from a range of disciplines including Adult Nursing, Child Health Nursing, Clinical Psychology, Occupational Therapy and Medicine.

Using qualitative analysis software (QSR NVivo), data were analysed in three phases; phase one constituted an individual evaluator approach to the thematic analysis of participant reflective diaries while phases two and three included the mapping of video-stills from the observational field footage and verbatim quotes from the transcribed focus groups to illustrate the coded themes.

Rigour was optimised through continual peer debriefing, triangulation of the data sources and validation of the emergent themes by the healthcare student participants and PPI partners.

**Results:**
Five key themes were drawn out of the data collected from the healthcare students’ reflections on the learning derived from their collaboration with the Barne Barton PPI partners. These included:

- Practical application of prior learning
- Self-reflection
- In the community
- The community of Barne Barton
- Working together to benefit the community

Students felt that liaising with the community leaders to co-design and co-deliver a CEME event enabled them to contextualise prior learning as well as discover new pedagogic value from such a partnership.

**Discussion:**
By engaging directly with the Barne Barton PPI partners, students felt they had integrated easily into the community, gaining the trust of its members. They felt better able to contextualise public health issues outside of the classroom, develop their communication skills, adopt a professional identity away from the hospital and become more culturally aware; which boosted self-confidence and skills. The community leaders’ unique insight into Barne Barton’s health requirements allowed for the event to be genuinely tailored to the community’s needs, which would have been impossible had the students simply parachuted in with pre-determined ideas.

**References:**
A constructivist designed workshop to promote confidence and allay anxieties for Foundation doctors when discussing Do Not Attempt Cardiopulmonary Resuscitation

M Ramadas, B Clark
Imperial College Medical School

Background:
Cardiopulmonary resuscitation (CPR) has a low success rate and significant complications. Decisions and discussions surrounding it are often challenging yet a vital part of medical practice (1). Indeed the Foundation Programme syllabus states a Foundation doctor ‘should be able to discuss Do Not Attempt Cardiopulmonary Resuscitation (DNACPR) decisions (2).

Most foundation level doctors discuss DNACPR with patients and families, however only a third feel comfortable (3). Interestingly, junior doctors feel significantly less confident about their ability to discuss DNACPR than to discuss consent for medical procedures (4).

This pilot study aims to identify Foundation doctors’ self-confidence in discussing DNACPR decisions pre and three months post a mandatory workshop designed at improving confidence in such discussions.

Methodology:
The workshop was delivered during separate mandatory teaching sessions for Foundation Year 1 (FY1 n=21) and 2 (FY2 n=15) doctors. It utilised a constructivist framework and centered around three phases. Phase one incorporated theory from the resuscitation council together with practical examples of how to complete DNACPR documentation according to trust guidelines. The second phase involved a case scenario and role-play discussions dealing with common anxieties based on personal experience. The final phase included a semi-structured group debrief.

Prior to the workshop self-rated confidence level and anxiety surrounding DNACPR discussions were assessed using a questionnaire to capture quantitative and qualitative data. This will be followed up again at three months to evaluate whether the workshop has resulted in self-rated behavior change (5).

Results:
Self-confidence rating at discussing attempted CPR with patients for FY1s was median score 5 and for FY2s was median score 7 (1 – Novice, 10- Expert). The majority of FY1s and FY2s stated they were able to explain why attempted CPR was not appropriate with a median score of 3 indicating ‘moderately well’ (1 – Not well at all, 5 – Extremely well).

Our qualitative data for FY1s shows the most frequent anxieties about DNACPR discussions were: family response (negative reactions and misunderstanding), knowledge base (regarding clinical knowledge and legislation) and clinician difficulties (communication skills and discomfort with professional role). Comparatively, FY2s had the same themes but were not concerned about clinical knowledge base or discomfort with professional role.

A follow-up questionnaire will be done in three months to evaluate the usefulness of the workshop in terms of the Foundation doctor’s self-confidence ratings and anxieties. These results will be presented.

Discussion:
Our results show confidence at discussing attempted CPR improves from FY1 to FY2. However as outlined in the results, many common anxieties exist for both FY1s and FY2s with regard to DNACPR discussions. In the design of our workshop the case scenarios and debrief gave the foundation doctors an opportunity to develop their confidence in a constructivist manner. Furthermore, this enabled them to discuss their anxieties surrounding DNACPR discussions with their peers. A three month follow-up will determine whether this constructivist approach was useful in terms of addressing anxieties and building confidence.

References:
A mixed methods study of the perceptions and experiences of paediatric trainees to supervised learning events
S Li
Nottingham Children's Hospital

Background:
Workplace-based assessments (WPBAs) were introduced into postgraduate medical training following its redesign to competency-based progression (1). Despite being integrated within paediatric training since August 2007 there have been increasing concerns regarding their implementation with a number of studies highlighting trainees views regarding their purpose of WPBAs as little more than a ‘box-ticking exercise’ (2) (3). The contentious use of the word ‘assessment’ has led to the feeling amongst trainees that they are summative in nature, rather than being formative as intended. Consequently a number of studies have reported a negative impact on trainee engagement with these tools such that complex cases are not discussed, only the minimum amount are undertaken to achieve ‘sign-off’, and trainees seeking friendly assessors for a positive mark.

It is against this backdrop that in August 2013 changes were made to WPBAs which were renamed supervised learning events (SLEs). Few studies have specifically examined whether trainees attitudes to these educational tools have changed since emphasising their formative nature (4). This paucity of information is unfortunate as it is only by understanding the perception of SLEs amongst trainees that we can determine whether they have become positively embedded within postgraduate training. This study explored the current perceptions and experiences of paediatric trainees towards SLEs.

Methodology:
Using a sequential explanatory mixed methods research approach an online survey was developed based on previous studies of trainees perceptions towards WPBAs. Following a pilot survey amendments were made to the survey prior to it being sent to all United Kingdom paediatric trainees for completion. Data were analysed using Microsoft Excel for Mac.

Subsequently a series of semi-structured individual face-to-face interviews of paediatric trainees within the East Midlands explored the findings of the survey. Following verbatim transcription of digital recordings data were analysed using thematic content analysis and themes identified within and across interviews. The qualitative data were then used to interpret the results of the quantitative phase with reference to the published literature.

Results:
274 trainee survey responses were included for analysis. 77% of trainees agreed that SLEs were of educational value whilst 86% found the opportunity for face-to-face discussion useful. However 77% of trainees disagreed with the statement that they were easy to organise. Worryingly 49% of trainees believe that they are used to assess their performance such that 46% of trainees choose assessors who will provide favourable feedback.

These perceptions were further explored in face-to-face interviews. Trainees harbour a number of negative perceptions particularly highlighting the lack of assessor engagement, poor assessor feedback, and their summative role. However there is evidence of a positive shift towards acceptance of SLEs when they are performed correctly with trainees particularly appreciating the opportunity for reflection and discussion.

Discussion:
The shift in emphasis from the summative to formative purpose of SLEs appears to have led to a more positive attitude towards them. However there are still a number of issues trainees have identified which require addressing if they are to become more accepted. This study acts as a starting point for a more detailed analysis of SLEs applied within the context of postgraduate training with further studies necessary to explore the perceptions and experiences of SLEs amongst other paediatric stakeholders as well as users across other specialities.

References:
A pilot project reviewing the introduction of a ‘Top Tips’ video prior to starting the Foundation Programme
S Hyder, R Hatton, S Sreih, S Flavell and J Hillier
Chelsea and Westminster Hospital

Background:
It is well recognised that the transition from medical student to a Foundation Year 1 (FY1) doctor is a challenging one. The Foundation School guidelines are that FY1s should have a shadowing period and induction day before they start (1). FY1 shadowing and induction usually focuses on Mandatory Training requirements and arranging access to the Trust intranet services to ensure FY1 doctors deliver safe patient care. Despite this, a GMC report showed that only 69.9% of FY1s agree they feel prepared for their first foundation post (2). FY1 doctors are now starting work in increasingly demanding circumstances with more junior doctors presenting with stress and mental illness (3). The GMC report found that 4 out of 5 junior doctors believe their job ‘sometimes’ or ‘often’ caused them excessive stress – and 25% say it impacts their mental health. However, junior doctors are still unsure of where to seek support when they need to, and delay seeking help because of the stigma attached (4).

To try and address some of these issues, Chelsea and Westminster Hospital has developed and piloted a ‘Top tips’ video which is sent to FY1s to watch before they start work at the hospital.

Methodology:
The ‘Top Tips’ video is a 5-minute video which was sent to FY1 doctors before they started work in August 2016, to prevent an ‘overload’ of information at induction. In the video, outgoing FY1s talk about their experiences and give key ‘tips’ to the incoming FY1 doctors. The advice varies from how to prioritise ward workload, to staying healthy and seeking support early. The format of the video allows FY1s to watch it multiple times, if desired. After the completion of the first FY1 job rotation (December 2016), quantitative and qualitative feedback was gathered about the video in the form of a questionnaire given to the FY1 doctors. Further information was gathered from individual interviews with the FY1 doctors, with a particular emphasis on what they had found useful, and how the video could be improved in the future.

Results:
In the questionnaire, 94% of the FY1 surveyed (n=19) said they watched the video before they started FY1. They gave the video an overall score of 7/10. 89% of people said it was a good idea and should be repeated every year for each FY1 cohort. They talked positively about it being ‘an engaging video’ containing important information. Some FY1s also described how learning from the video shaped what they did when they started on the wards. For example, they tried to ensure they prioritised liaising with occupational therapists and physiotherapists to enable efficient discharge. However, FY1s did report that they would like more detail about avenues of support.

From the individual interviews (n=10), there was further reflection on how watching the video had influenced their practice. One FY1 said she still thought about the video when she had to manage frequent bleeps by ‘taking a pause and prioritising’, ensuring she managed to eat something which she wouldn’t have prioritised if she hadn’t watched the video. Most described that the video reassured them before starting work as they felt ‘less alone knowing that their peers had gone through busy or difficult times’. This had helped them to ‘survive’ and begin to enjoy their FY1 year. Some reported that having an introduction to key members of the Postgraduate team would have improved the video.

Discussion:
The video aims to give ‘tips’ which may not be covered in the FY1 induction, but that the outgoing FY1s think are important before starting as a doctor. It has an emphasis on the importance of self-care – managing workload and bleeps so they are able to have a break, and developing a life outside of work.

One of the main themes that came up in FY1 feedback was how positive it was to have the video presented by outgoing FY1s. Feeling part of a community of peers, who encourage each other to seek help, may be an important factor in reducing burnout and stress and can therefore promote good clinical care (5). The video might be one way we create a more open culture regarding these prevalent issues.

The video had overall positive feedback, but there is room for improvement. We are in the process of refining the video for the new FY1s who start in August 2017 and continue to obtain feedback through more individual interviews. We will ensure that it remains peer-led, but will respond to feedback by making sure it is more detailed about whom to contact for support. We will also include more ‘practical tips’ for how to respond to stressful situations.
situations on the wards. Responding to feedback and updating the video yearly, can ensure that it remains relevant and promotes a positive grounding for FY1s as they start their first jobs.

References:

Ref: 100, Board: D4
Accelerated learning at Masters' level: Case-Based Learning of Diagnostic Reasoning skills by Physician Associate Students?
N Dearnley, R Howell, W Scott-Smith, N Sudarsan
Brighton and Sussex Medical School

Background:
The first cohort of Physicians Associate (PA) students commenced at BSMS in September 2016. The 2 year postgraduate course is delivered at Masters level and requires students to assimilate diagnostic reasoning skills equivalent to graduating final year medical students. These skills therefore must be developed within an accelerated trajectory. As such the PA faculty has developed an explicit strategy in the development of these skills. This has taken the form of framework lectures and Case Based Learning with a diagnostic reasoning focus. Case Based Learning (CBL) sessions involve facilitated group discussion around a dedicated clinical case. This is aligned to learning outcomes blueprinted against the national curriculum. This adopts a phased vertical integration approach, placing delivery of biomedical knowledge before exposure to clinical practice. Structured ‘mind mapping’ is utilised following an ‘illness script’ format (a mental representation of illness) which is then used to develop learning objectives around the clinical case. These place emphasis on producing and justifying potential differential diagnoses and guide further self-directed learning which is then shared at a subsequent review meeting.

Methodology:
This study adopted a mixed methods approach to investigate how the Case Based Learning scenarios influence the development of the PA students’ diagnostic reasoning.
(1) Diagnostic Thinking Inventory: This is a validated 41 question inventory designed to measure 2 aspects of diagnostic thinking: degree of flexibility in thinking and degree of knowledge structure of memory. This produces a score which can be compared to standardised groups at different levels of medical training.
(2) Questionnaire: A questionnaire designed by the CBL faculty to evaluate students’ self-reported engagement, diagnostic thinking, and learning using 7 point Likert scales and free text boxes. These will be completed by participants at the end of each term of Year 1 in order to map the trajectory of learning relating to their diagnostic thinking compared to those

Results:
Results are currently available for the first round of assessment. This data shows that at baseline the PA students have a proportionally higher score in flexibility of thinking (equivalent to foundation year doctors) when compared with structure of thinking (equivalent to approximately 3rd year medical students). Full results for the first year of this study will be available by the time of the conference.

Discussion:
This is part of on going longitudinal study and will be continued with larger numbers in subsequent years using the same methodology and teaching practice. We anticipate that this study will add to existing knowledge about Case Based Learning with particular focus on its impact in Postgraduate Education.

References:
(3) Durham, C, Fowler, T, Kennedy, S. Teaching Dual-Process Diagnostic Reasoning to Doctor of Nursing Practice Students: Problem-Based Learning and the Illness Script. Journal of Nursing Education. 2014 53(11)646-650

Ref: 058, Board: D5
An FY2 teaching programme delivered exclusively by Core Medical Trainees
O Anyiam, K Jobling, N Walmsley, V Ware
Newcastle upon Tyne NHS Foundation Trust

Background:
The Academy of Medical Royal Colleges stipulates that “there should be a generic teaching program in both F1 and F2”(1). Training hospitals meet this obligation by providing regular teaching sessions for their Foundation Trainees, which are mostly delivered by consultants. Junior doctors are also expected to develop their teaching skills during their training, indeed the Core Medical Training curriculum states that Core Medical Trainees (CMTs) “should develop the ability to teach a variety of different audiences”(2).

One way to combine the needs of junior doctors to develop their teaching skills with the requirement to provide Foundation Trainees with regular teaching is through near-peer teaching (NPT). NPT – trainees teaching their more junior trainee colleagues – has been widely described in undergraduate medical education. Learners tend to value this form of teaching, citing that near-peer tutors provide clear explanations and communicate in a language they can easily understand(3,4).

Currently, only NPT programs involving undergraduate learners have been described, therefore it is not known whether junior doctors report similar benefits when taught by their near-peers. At Newcastle upon Tyne Hospitals NHS Foundation Trust, we developed an NPT program involving exclusively postgraduate medical trainees, the first of its kind in the UK. This study describes its design and ongoing evaluation.

Methodology:
A teaching program was developed in which second-year Foundation Trainees (FY2s) were taught by CMTs. Prior to the start of the program, CMTs were sent an invitational e-mail and selected based on their level of enthusiasm and availability. Concurrently, FY2s were asked to identify topics related to their daily clinical work on which they would like teaching. A list of topics was created and matched to the Foundation Programme Curriculum, then was distributed among the CMTs based on their areas of interest.

The program commenced in September 2016 and is ongoing. Sessions are conducted every Tuesday alternating each week between the two main hospital sites in the Trust. Evaluation questionnaires formed of seven questions with a 5-point Likert scale have been distributed at each session.

Results:
The full evaluation results of the program will be presented in detail, however preliminary results have been obtained. To date, eleven sessions have occurred with a total of 37 attenders. Attendance numbers to each session have varied, ranging from 1 to 11 learners. The sessions have been rated highly with ten of them receiving an average rating of ≥4 and three receiving a 5 out of 5 rating from all attenders.

Of the 37 attenders, 100% and 97.3% agreed/completely agreed with the statements “the tutor had sufficient knowledge of the topic” and “the material covered was relevant to my clinical practice” respectively. Furthermore, 89% agreed/completely agreed with the statement “I would recommend this session to other FY2s” and 67.6% agreed/completely agreed with the statement “the session advanced my knowledge of the topic”.

In addition, 67.6% of attenders disagreed/totally disagreed with the statement “the teaching was pitched at a level that was too basic” and 63.9% disagreed/totally disagreed with the statement “I would prefer if this session was taught by a Consultant”.

Discussion:
The evaluation results from the first eleven sessions demonstrate that most FY2s felt the teaching from their CMT colleagues was valuable and relevant. Some articles have described the potential disadvantage of near-peer tutors lacking the knowledge to teach certain topics or challenge their learners(5,6), however the majority of our attenders disagreed with this. The preliminary results of this study suggest that the benefits of NPT reported in undergraduate training could also be seen in postgraduate training. We propose that near-peer teaching programs could enhance the training of junior doctors and call for further studies into their benefits in the postgraduate setting.

References:
Broadening the Foundation Program: the educational utility of "community" placements

J Petrie, R Brown
Imperial College NHS Healthcare Trust

Background:
In the 2014 publication “Broadening the Foundation Program” Higher Education England (HEE) recommended that 80% of Foundation doctors should undertake a “community” or “integrated” placement, with this number increasing to 100% by August 2017 [1]. In common with many others, our Hospital Trust (Imperial College Hospitals NHS Healthcare Trust) has introduced a number of new “community” posts, many of which are in clinical areas unaccustomed to Foundation doctors. We sought to evaluate the educational experience provided by these new posts as well as the more longstanding posts, and also the overall Foundation Program.

Methodology:
Foundation doctors who had left the Trust in August 2016 were e-mailed with a link to complete an online survey. A further chaser e-mail was sent 3 weeks later.

Results:
A total of 28 Foundation doctors responded; 9 Foundation Year 1 doctors and 19 Foundation Year 2 doctors. Three doctors only filled out the evaluation concerning their overall Foundation program, the remaining 25 doctors filled out an evaluation of each individual post as well as an evaluation of their overall Foundation program. As a result we had 75 sets of individual feedback on 41 different posts (9 community based and 32 non-community based). For some of the posts we had several sets of feedback (for example, several of the doctors surveyed had completed A&E posts and 2 doctors completed the same Psychiatry post at different times in the year).

Of the 28 doctors, 10 had completed community placements in the previous year; eight out of the 10 would recommend the community placement to their colleagues (80%). All 28 doctors had completed non-community posts and we had 65 sets of individual feedback from the non-community posts. Doctors reported that they would recommend the post to colleagues in 78% of cases. Community posts were rated similarly on workload, challenge and level of support. There was a slight trend for community posts to be rated as less useful and less interesting but this was not significant.

Discussion:
Our survey strongly suggests that community Foundation placements are viewed as a positive educational experience by the Foundation doctors. Further investigation with larger numbers is needed to validate these results and we are in the process of undertaking contemporaneous investigation of the Foundation program in 2016-2017 through surveys and focus groups to provide more information.

References:
Building confidence in leadership, management and communication skills for core surgical trainees during handover
Z Oliphant, R Bamford, A Humphreys, J Bennett, J Coulston
Gloucestershire Royal Hospital

Background:
Handover during the emergency surgical take is a complex professional activity, requiring development of knowledge, attitude and skills (Bloom’s Domains of Learning, 1956). Core trainees must progress from participating in handover to leading handover, as they learn registrar roles. This session uses simulation, reflection, small group discussion in buzz groups and near-peer facilitation (Bulte et., 2007) to accelerate that transition. The learning objectives were to deconstruct handover and build confidence in managing the emergency surgical take and telephoning the consultant on-call.

Methodology:
Core surgical trainees in Severn were invited to a regional teaching day on ‘surgical emergencies’ incorporating a 45-minute session on handover. In buzz groups, trainees were asked to reflect on their own experiences of handover; simulate prioritisation of cases at handover with small group discussion; and telephone the on-call consultant to summarise the admissions. Learners gave qualitative feedback and also self assessed their confidence using a Likert scale (1 = strongly disagree; 5 = strongly agree).

Results:
17 learners returned feedback forms. Learners reported greater confidence in prioritising patients (mean 4.5). Trainees felt more confident in telephone communication with the consultant (mean 4.0). Trainees identified the importance of ‘being assertive in asking the boss to come in’; ‘expressing what I want when phoning consultants’; ‘making it clear in a phone call what you need at the beginning of the conversation’; and ‘clear concise communication.’ One trainee learnt ‘ways of managing a team on call as a leader.’ Learners found the teaching modalities helpful for improving handover in clinical practice: simulation (mean 4.2); reflection (mean 4.3); and small group discussion (mean 4.5). Trainees felt better prepared to start as an ST3 registrar (mean 4.5).

Discussion:
This session was beneficial for core trainees as they transition to surgical registrars. The use of several different teaching modalities within a short session was effective for building confidence in prioritising patients and telephone communication with the consultant. Trainees also reported ways in which the session could benefit their clinical practice.

References:
Choosing a Specialty: Have changes in postgraduate medicine training affected factors influencing career choice?
H Beckwith, M Kingsbury, J Horsburgh
Imperial College London

Background:
Whilst for some trainees choice of specialty is relatively simple, over half of all doctors will still not have decided which specialty to specialise in after completion of their first postgraduate year [1]. This figure is higher in doctors who subsequently choose hospital–based specialties [2]. Concerns have been raised about recruitment and retention in many specialties [3]: one of the reasons postulated has been a lack of exposure at undergraduate (UG) and postgraduate (PG) levels. Following ‘Modernising Medical Careers’ (MMC) (2003) [4] trainees have needed to make career decisions at an earlier time point, potentially having rotated through fewer specialties, with reduced opportunity for critical exposure. This study aims to examine factors and considerations specialty physicians (pre- and post-MMC) used when making their career choices and to explore insights gained from their experiences.

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

Results:
Role models were pivotal in career selection and in this study, interestingly, were all encountered after graduation. ‘Inspiring’ doctors with positive behaviours and ethics, who fostered involvement were positively recounted. The ‘need to fit in’ with people who were already working in the specialty was highlighted, suggesting individuals might identify role models with similar traits to themselves.

Previous experience was also paramount, with all participants having previously worked in the specialty they applied for. For some trainees, this exposure was accidental; others had developed a specialty interest whilst an UG and consolidated this as a PG trainee. 3/5 of trainees in this study had identified their specialty intention at medical school, compared to 0/6 consultants. This suggests trainees may be making decisions regarding career specialties earlier than their predecessors.

The role of relationships within the specialty (both intra-professional and with patients), patient diversity, acuity of patients and the presence (or absence) of continuing care were all considered factors in specialty choices. Career decisions were also influenced by the degree of emphasis the speciality placed on other associated areas for example academic medicine or the provision of holistic care.

Finally internal justification and needs fulfilment were important deliberations when making career choices, with the desire ‘to make a difference’, ‘to achieve’ and ‘feel successful’ all noted.

Discussion:
There are multiple factors that influence career decisions and underlying reasons for specialty choice do not look to have changed since the restructure of PG training. The impact of positive role models and importance of previous experience are consistently of particular significance. In contrast to previous work [5], all role models in this study were encountered after graduation, which may reflect a lack of UG exposure to certain specialties or an increased focus on long term career plans once graduated.

Focussed career support for trainees should be a priority. Since MMC it appears career decisions are having to be made earlier, potentially without the benefit of prior specialty experience. This may mean trainees are missing critical transition points. Increasing experience through shorter placements or longer early training programmes could aid recruitment to under-filled specialties.

For trainees to optimise their early postgraduate years, they should be encouraged to apply for programmes that contain specialties they think they may be interested in working in. This requires educators to identify objectively the current nature and demands of different specialties, as well as to recognise and appraise the strengths and attributes of individual trainees.

References:


Ref: 358, Board: D9
Flipping the Classroom: The Case of a Postgraduate Research Methods Workshop
S Shaw
Brighton and Sussex Medical School

Background:
Postgraduate masters students are expected to develop a high degree of self-sufficiency in their learning. This includes filtering and assimilating large quantities of information. They need, therefore, to be able to critically appraise research papers (1).

The flipped classroom refers to “an approach whereby course material is first presented to students prior to class... Class time is then used for learning-centred activities that build on the pre-class work, rather than traditional instructor-led lecture sessions” (2). This paper explores its application to a postgraduate workshop on the critical appraisal of research papers – to assess the educational value of such a session.

Methodology:
A workshop on the critical appraisal of research papers was delivered as part of a “Research Methods and Critical Appraisal” module – a module undertaken by all Masters students within a single UK medical school. The aim of this module is to prepare them to undertake their dissertations.

Participants were emailed a primary research paper one week in advance of the session. They were asked to familiarise themselves with, but not learn, the paper. The session was then run as an interactive, group session, drawing upon their familiarity with the paper in order to critique it in stages.

Participants were asked to fill out a short pre- and post-session questionnaire. A free-comments box gathered additional feedback. They were asked to rank their agreement with a variety of statements on a scale of 1 (completely disagree) to 10 (completely agree). Data were analysed using a paired t-test to assess the session’s educational value.

Results:
Thirteen postgraduate students attended this session. All thirteen learners completed the feedback questionnaire. They demonstrated statistically significant changes in all confidences relating to critical appraisal. Participants’ understanding of the meaning of “critical appraisal” improved (increase of 3.08, P = 0.0002, 95CI 1.78-4.73). Their confidence in critically appraising papers improved (increase of 3.38, P = 0.0001, 95CI 2.16-4.61). Their awareness of where to find help/resources for critical appraisal improved (increase of 3.15, P = 0.0001, 95CI 2.03-4.28). They felt better able to critique research papers for their dissertation literature reviews (increase of 3.92, P = 0.0001, 95CI 3.05-4.79). They also felt better able to critique research papers for the purpose of publication (increase of 3.77, P = 0.0001, 95CI 2.69-4.85).

“It was nice to do this as a workshop [rather] than a ‘taught’ session.”

Discussion:
These results were based upon the study of small numbers. The results did, however, demonstrate statistically significant improvements in every element of the pre- and post-session confidence ratings. Based on these numbers, this method appears effective for the teaching of critical appraisal skills to postgraduate Masters students. Further study of larger numbers is now needed.

References:

Ref: 028, Board: D10
Foundation trainees view on their ability to raise concerns about bullying and undermining in the workplace
S Flavell, D Wallace, J Hillier
Mortimer Market Centre

Background:
For junior doctors working within the NHS bullying remains a problem. The 2014 GMC National Training Survey revealed 8% of respondents reported bullying and 13.6% had witnessed it.(1) Despite this further action is hindered due to a lack of information within free text comment boxes. Bullying has been associated with poor performance and increased medical errors. (2,3) With an ever increasing focus on improving patient safety, can this be fully tackled if bullying remains? Studies have found many barriers to raising concerns. The fear of negative impacts on training and career progression, organisational culture and lack of leadership all contribute to the culture that remains within the NHS. (4,5)
With foundation trainees at the forefront of the NHS’s future, this study aimed to explore their perceptions of how they might raise concerns around bullying and harassment in the workplace.

Methodology:
A phenomenological research approach was taken where understanding the trainees perceptions was the key focus. There was the recognition that “behaviour is determined by the phenomenon of experience”.(6)
Seven foundation doctors, from a pool of ninety, were recruited via a convenience sampling strategy to participate in a focus group. The focus group participants consisted of a mixture of foundation year one and two doctors in the hope that varying experiences would spark discussion. The questions were semi-structured and concentrated on:
1. Foundation doctor empowerment
2. Potential barriers to reporting
The focus group was audio recorded and then transcribed verbatim by the researcher. Thematic analysis of emerging codes was used for data analysis.(7)

Results:
At some point in their career each participant had witnessed bullying and there was a clear consensus that they knew the procedures of reporting it. Several themes emerged from the data. Undermining and bullying were perceived as difficult to categorise and very subjective. At what point does banter become bullying and raise the alarm bells for this to be reported. A culture of acceptability and normalisation of these behaviours was highlighted within teams. However team culture had a dual role both in its supportive nature but also as a barrier to reporting. The fear of negative repercussions, persecution and lack of anonymity all fed into reasons that would inhibit a foundation trainee raising concerns.
A lack of confidence in challenging unacceptable behaviour, within often hierarchical relationships, was key to the lack of empowerment they felt.

Discussion:
Foundation year 1 doctors are subject to some of the highest rates of bullying in healthcare and empowering junior doctors to be able to raise concerns is essential.(3)
Foundation training is transient with doctors encountering a new community of practice (CoP) every four months. Initially as a peripheral participant but then integrating within the community or team in theory may be contributing to barriers against raising concerns. The conflict between a sense of belongingness and isolation if they were to report against the culture of that team is challenging.
A culture of bullying that is not being challenged but accepted and normalised calls for change. Learning about raising concerns around bullying as a foundation doctor is from a variety of sources; GMC Good Medical Practice, didactic teaching and role modelling. Ensuring more leaders in our organisations set a precedent around reporting may be one of the first steps to change.

References:

Ref: 097, Board: D11
Foundation Year 1 Doctors experiences of conducting ward rounds alone: A regional survey

J Pearce, S Gajebasia, M Redman, S Govan, A Harlinska, M Brown, R Tremain.
Hull York Medical School

Background:
A previous project in one NHS Trust demonstrated that Foundation Year 1 (FY1) doctors were regularly conducting medical ward rounds alone, but did not feel prepared for this(1).

Methodology:
To explore this issue in more detail, all FY1s on medical rotations in Yorkshire and the Humber (Y+H) were asked, via email, ePortfolio messages and snowballing, to participate in an online survey at the end of their first rotation in December 2016. The survey enquired about their experiences of conducting ward rounds alone and any training they had received to prepare them for this. It also sought their opinions on whether conducting ward rounds alone was valuable for learning, whether they should receive teaching in this area before starting work and finally, whether FY1s should conduct ward rounds alone at all.

Results:
Of the 289 FY1s on medical rotations in Y+H during August-December 2016, 34% responded (n=98). Of the respondents, 56% (n=55) had never received teaching on ward round conduct. 62% (n=61) reported conducting the ward round alone twice a week or more often. Most FY1s reported being able to make decisions regarding requesting simple investigations (80%; n=78), changes to symptomatic treatment (72%; n=71) and involving other members of the MDT without delay (63%; n=62) when conducting ward rounds alone. In contrast, few were able to make decisions regarding discharging patients (11%; n=11), initiating end of life care (3%; n=3) and ceiling of care decisions without delay (2%; n=2). 7% (n=7) reported feeling prepared for conducting medical ward rounds alone at the start of their medical rotation, which increased to 64% (n=63) when reflecting on the end of their medical rotation. 38% (n=37) usually felt supported when conducting ward rounds alone. When asked about their opinions of FY1-led ward rounds: 65% (n=65) felt conducting ward round alone as an FY1 was valuable for learning; 92% (n=91) felt that FY1s should receive formal teaching on how to conduct a ward round before starting work and; 35% (n=34) felt that FY1s should conduct medical ward rounds alone.

Discussion:
This study supports previous findings that FY1s are regularly conducting ward rounds alone, but do not feel prepared for this when starting work(1). By including FY1s from thirteen NHS Trusts, the findings are more generalizable to FY1s across the UK. It gives a better understanding of FY1s’ experiences and opinions on this matter. 65% (n=65) of FY1s agreed that leading ward rounds is valuable for learning, but they had mixed feelings about whether they should be conducting ward rounds alone at all. Whilst the majority of respondents believe FY1s should receive training in this area before starting work, less than half of those surveyed had. This study also demonstrates potential implications for patient care, such as possible delays in decision making. More work is needed to prepare and support future doctors for conducting medical ward rounds alone.

References:

Ref: 405, Board: D12
Fundoscopy – Visualising The Problem. How can virtual reality simulation teaching aid basic fundoscopy skills?
E Darvill, S Hunt, J Ferris, P Fletcher
Gloucestershire Hospitals NHS Foundation Trust

Background:
Examination of the fundus is essential for the complete clinical examination of a patient (Cordeiro et al, 1993; Dalay et al, 2013; Roberts et al, 1999; Schulz & Hodgkins, 2014). It is required for the accurate diagnosis of many sight and life threatening medical conditions (Kelly et al, 2013).

However, fundoscopy is not performed frequently as part of acute medical assessments (Dalay et al, 2013) and is often performed poorly by non-ophthalmologists (Kelly et al, 2013). Some 43% of GPs lack confidence in using an ophthalmoscope (Shuttleworth & Marsh, 1997) and in a survey of general and geriatric medicine physicians, all felt that ophthalmoscopy was important but only 4% performed it routinely (Roberts et al, 1999). One of the most commonly cited reasons was a lack of technical skill (Kelly et al, 2013; Roberts et al, 1999).

Training in fundoscopy is variable and often very little formal instruction is provided in teaching hospitals due to constraints on time, tutors and availability of patients (Cordeiro et al, 1993). Many doctors feel that they had insufficient training in fundoscopy and that their skills could be improved (Dalay et al, 2013; Roberts et al, 1999). There is a need to develop different methods of teaching to help trainees maintain this basic clinical skill (Dalay et al, 2013).

We designed a study to assess the impact of virtual reality simulation training on the fundoscopy skills of medical and GP trainees.

Methodology:
The Eyesi direct ophthalmoscope simulator uses virtual reality to deliver fundoscopy skills training. Trainees at Gloucestershire Hospitals NHS Foundation Trust were invited to participate in a training programme on the Eyesi simulator. Their competence and confidence at performing fundoscopy were assessed before and after our intervention. A final test of technical skills on both the simulator and on real patients was used to assess the predictive validity of virtual reality simulation.

Results:
Data collection is ongoing; the full data on confidence before and after intervention and on subsequent practice in the clinical workplace as a measure of predictive validity will be presented.

Discussion:
The results will be discussed within the context of the current literature to draw out implications for future practice and to conclude with recommendations for training and further research.

References:
Kelly LP, Philip S, Garza, Bruce BB, Graubart EB, Newman NJ and Biouss V. “Teaching Ophthalmoscopy to Medical Students (the TOTeMS Study).” American Journal of Ophthalmology. 2013; 156:1056-1061
Schulz C and Hodgkins P. “Factors associated with confidence in fundoscopy”. The Clinical Teacher 2014; 11:431-435

Ref: 293, Board: D13
Initiating a Peer-Mentoring Programme for Foundation Year 1 Doctors at a District General Hospital

F Latif, K Ryland, C Jackson, C Hickson, J Daniel
Great Western Hospital, Swindon

Background:
Of all the factors contributing to a thriving and efficient work environment, none is more important than a valued workforce. Although morale in the NHS workforce has been low for some time, lead up to the imposition of the new Junior Doctor Contract has raised real concerns about its effects on patient safety[1]. In addition, the transition period from medical student to Foundation Year 1 doctor (FY1) is often a difficult rite of passage[2]. Dealing with uncertainty, i.e. not knowing what is expected in your new role, when and who to approach for help, expectations of slipping into the role of your predecessor almost instantly, can all lead to much anxiety and stress[3]. A peer-mentoring programme at Great Western Hospital was initiated to provide new FY1s with an accessible point of contact for day-to-day clinical concerns, professional development and pastoral support throughout the year. Our aim was to improve the transition experience for FY1 doctors, promote junior doctor well-being and morale, help them feel valued, and thereby support them to provide better patient care.

Methodology:
A retrospective baseline survey of current FY2s was used to assess whether they felt adequately supported clinically, professionally and personally during their FY1 year. The results indicated a strong need for a peer mentoring programme. A Trust-wide email was sent to post-Foundation, sub-Consultant level doctors to recruit mentors, receiving 29 replies. 30 FY1 mentees were matched with mentors based on their speciality of interest. A meet-and-greet event with food and drink was hosted to introduce the new initiative, the organising team, and distribution of key information i.e. aims of mentoring, support available and escalation chain. Three months later, a qualitative sample survey of 10 FY1 doctors was conducted, highlighting a need for more social events, careers talk and clarification about the role of the mentoring. A Christmas social was organised by the mentoring team which was well received by FY1s. We liaised with Severn Deanery’s Personal Support Unit to organise an educational session about managing stress, mentoring and exams, due to be held during the Foundation Programme mandatory teaching. An informal peer-led career’s evening has also been organised.

Results:
A baseline questionnaire distributed to 27 current FY2s received 21 responses (78%). 27% of FY2s reported receiving good clinical support during their FY1 year, including help with supervised learning events, e-Portfolio and reflective practice, advice about efficient use of clinical time and department-specific advice. 23% of FY2s reported adequate professional support regarding specialty applications and exam advice during their FY1 year. 49% of FY2s reported feeling under-supported in terms of pastoral support (transitioning from student to doctor, stress management and personal support). Three months later (end of first clinical rotation), a sample of 10 randomly selected FY1 doctors (33%) was surveyed to gauge the initial response to the mentoring programme. 48% and 50% of FY1s reported feeling better clinically and professionally supported by having a named mentor, respectively, showing a 78% and 117% increase in levels of support from the baseline survey. Qualitative feedback from the survey was used to plan the next steps for improvement and a follow-up survey will be conducted in a further three months.

Discussion:
The mentoring programme has been well received and supported by the Post-Graduate Medical Education (PGME) department, who are keen to promote junior doctor morale in the current climate of the NHS. Although some mentors and mentees have not engaged with the programme, the vast majority of FY1s report positive feedback; “a great idea”, “very helpful”. The initiative involves minimal cost to the PGME who plan to continue to support and develop the programme next year by providing formal training for mentors, improved advertisement, and further support for less-than-full-time FY1s.

References:

Ref: 163, Board: D14
Learning leadership skills for the surgical ward round
Z Oliphant, E Papworth, R Bamford, A Humphreys, J Coulston
Gloucestershire Royal Hospital

Background:
Surgical ward rounds are highly important as the daily point of interaction between patient and healthcare professionals. They can be highly variable with increased morbidity if undertaken poorly (Pucher et al., 2014). In a surgical firm where senior clinicians have daily commitments in theatre and clinic, the ward round is a critical time for making and communicating decisions to the patient and the team. There may be significant time pressures, leading to poor documentation and flow of information throughout the medical and nursing team. The aim was to better prepare Core Surgical Trainees to deliver safe and effective ward rounds for optimum patient care.

Methodology:
As part of coordinated Core Surgical Training programme, trainees were invited to attend simulation ward round teaching within the first week of commencing their training role. Trainees received 75 minutes simulated ward round teaching with debriefing in small groups. Debriefing focused on leadership, communication, teamwork and decision making using a ‘Gather; Analyse; and Summarise’ model (Phrampus and O'Donnell, 2013). Trainees were asked to self-assess their confidence in ward round skills in a pre- and post-course questionnaire. Trainees also gave feedback on teaching methods.

Results:
24 trainees completed pre- and post-course questionnaires. Trainees reported a significant increase in self-reported ability in assessing a surgical patient (p=0.008) and managing patients on a ward (p=0.005). Trainees also reported a significant increase in their understanding of how to be an effective leader on the ward round (p=0.001) and understood the roles of others on the team, including the patient (p=0.001). One trainee said ‘simulated ward round was very thought provoking and I feel has better prepared me for work as a CST [core surgical trainee].’ 85% trainees agreed it would prepare them for their workplace, and enjoyed the session, and that it was delivered in a useful way.

Discussion:
Simulation ward round training is clearly useful and important but is not widely employed as a teaching tool. Core trainees are an important bridge between junior and senior members of the team, within the traditional surgical hierarchy. Empowering core trainees in their ability to manage patients on the ward, and as team leaders and decision makers, may help flatten the hierarchy enabling junior doctors to speak up about potential patient safety issues as they arise.

References:

Ref: 388, Board: D15
Optimising PowerPoint slides to improve learning of sepsis topics – is restricting text the answer?
S Sunny, P Munthali, R Cottrell, R Manjunatha, P Ray
University Hospitals Coventry & Warwickshire NHS Trust

Background:
Sepsis, a syndrome of ‘life-threatening organ dysfunction caused by...infection’ (1), is estimated to be the cause of at least 1 in 20 deaths in the UK (2). The recognition and management of this condition is not helped by recent revisions of definitions (1) and by the complexities of microbiology specimen collection (3). The role of hospital-based teaching to improve sepsis outcomes has been little studied outside of costly interventions, such as simulation (4) and e-learning packages (5), delivered outside of allocated teaching time. The aim of this pilot study was to collect data on an education intervention that could utilise existing resources and pre-allocated teaching time. Although the optimisation of lecture-based microbiology teaching has been little studied, it has recently been suggested that retention of microbiology teaching may be improved with the use of images (6). Inspired by this, this study was designed to gather information on the use of an images-based, text-restricted PowerPoint presentation to teach sepsis definitions, appropriate choice of microbiology samples and situations to consider antibiotic change.

Methodology:
Foundation Year One (FY1) doctors at a 1,250-bedded acute teaching hospital attending a weekly teaching session were approached to participate in this pilot study. The intervention, delivered at this session, consisted of a PowerPoint presentation designed with images/computer drawings but with ≤10 words per slide. Pre- and post-intervention questionnaires were distributed in paper form and computer-generated random numbers were used to match responses while ensuring anonymity and confidentiality. Multiple-choice questions (MCQs; short stem with 4 answer choices - 1 correct answer) were repeated across questionnaires to assess improvements in knowledge. Data on confidence, acceptability of intervention and opinions on the future use of this style were collected using 4-point Likert-type scales.

Results:
All 20 FY1 doctors who attended the teaching session participated in this pilot study, out of 47 possible attendees to weekly teaching. Pre-intervention, 30% of respondents selected the correct answer for the first knowledge question on sepsis scoring and 70% correctly answered the second MCQ on appropriate sample choice. Post-intervention, the percentage of correct answers increased to 100% and 80%, respectively. The final knowledge MCQ on an appropriate situation to consider changing antibiotics was answered correctly by all respondents both pre- and post-intervention. 2 respondents who initially correctly answered the second MCQ later selected an incorrect answer, instead opting for an investigation that had been verbally discussed but not visually represented on PowerPoint slides. 95% of all respondents thought that images-based teaching was moderately or very helpful in their learning of the topics. 70% replied that they would like to see this style used in future teaching. 40% expressed an increased confidence in choosing appropriate microbiology samples for septic patients post-intervention and no respondents were less confident in the topic.

Discussion:
Initial data from this pilot study suggests that restriction of text and an increased use of images in PowerPoint presentations can produce positive learning outcomes in the teaching of microbiology topics, albeit clarity of verbal discussion appears vital in ensuring appropriate knowledge acquisition. This images-based style is well-received overall and should be considered in future teaching as an alternative to text-laden presentation styles. This teaching style is one possible manner in which scheduled teaching could be optimised before the adoption of costly, resource-dependent interventions outside of regular teaching schedules. However, further work is required to evaluate the effectiveness of images-based styles compared to teaching styles currently in use amongst clinician tutors, especially its impact on long-term retention of complex sepsis topics.

References:
Postgraduate learning by video conference: time for a rethink?
A Dewar, K Adamson, H Monaghan, S Edgar
University of Edinburgh

Background:
The video conferencing (VC) industry - whereby medical trainees together across sites of service provision can learn 'together' - has boomed over the past two decades.1 High speed broadband internet connections allow for a reliable, higher definition of sound and vision transmission. Cheaper hardware allows for VC hubs to be established at relatively low cost, and low maintenance - for medical trainees, these costs offset by savings in expenses for both tutors and learners, a reduction in 'off-the-ward' time with the elimination of inter-site travel and inevitable 20-minute wait for a car park space at the other end of the journey! With gains in technological possibilities come losses in technical skill teaching, mastery learning, and social interaction. Online suture practice is challenging even to the most technologically savvy plastic surgeon. The most gifted orator will struggle to prevent casual social media surfing on phones not-so-subtly hidden under desks in another room, whether the room is adjacent or many thousands of miles away. Gone are the smiles of encouragement, the 'horror stories', the 'keep calm and carry on' conservations between peers, who cannot show physical empathy across an internet connection. Directors of education, faced with the thankless task of balancing finance with high caliber teaching programmes and learning experiences, often see VC as value-for-money solution to the 'cross-site' problem, but is it the best medium to deliver an 'interactive' curriculum to postgraduate trainees? Do the 'losses' outweigh the 'gains' on this occasion? Outwith the bombastic customer recommendations on VC company websites, there is limited data to demonstrate VC's acceptability as a learning facilitator for medical trainees in the UK. We asked foundation year two (FY2) doctors working between three Scottish hospitals, linked by a weekly VC-based teaching session, to reflect on and share their experiences.

Methodology:
Using an online platform, an anonymised survey was created, combining Likert scale and free-text questions. The survey was circulated via email to all FY2 doctors working across three hospitals. The trainees working at the district general hospital were in the same room as the tutor; the trainees at the other two hospitals (one psychiatry, one rehabilitation medicine) joined the session via VC. The survey remained open for three weeks, and was highlighted at the lunchtime sessions.

Results:
13 doctors completed the survey, giving a 38% response rate. All the surveys were completed fully, so there were no exclusions. The response spread was representative of the proportional spread of FY2s across the three sites (6 DGH, 5 psychiatry, 2 MOE). The FY2s were asked how they agreed with the statement, 'I feel engaged during lunchtime teaching sessions'. Overall, 31% (n=4) agreed, 46% (n=6) were neutral and 23% (n=3) disagreed. When those at the DGH (i.e. those in the room with the tutor) were excluded, only one agreed with the statement, three were neutral and three disagreed with the statement. When asked, 'being in the same room as the tutor is important to me,' 70% (n=9) either agreed or strongly agreed. Stating, 'being in the same room as the learners is important to me', produced a more even spread (median=3, 'neutral'), and this was similar when each site was analysed individually. Free-text responses were thematically analysed to demonstrate areas for programme improvement.

Discussion:
While offering a straightforward (in manpower terms) solution to the 'learners and tutors geographical mismatch' provided by acute hospitals with finite resources, the authors conclude that, in this instance, foundation doctors engage with their teaching sessions far more when they are in the same room as the tutor and other learners. Free-text responses have provided the group with many useful suggestions which will be taken forward into a quality improvement project which places the tutor, and all of the cross-site FY cohort, in the same room.

References:
Putting peers through their PACES
R Browne, V Green, A Timperley, C Morgan
South Warwickshire NHS Foundation Trust

Background:
The MRCP (Membership of the Royal College of Physicians) diploma is a prerequisite for entering higher specialty training in the UK. The Practical Assessment of Clinical Examination Skills (PACES) component is designed to assess the required knowledge, skills and behaviours for practising general medicine. PACES pass rates are relatively low, at 45% overall in 2016 and 65% for UK graduates. Despite this, teaching and examination support remains variable. Learning is often self-directed and opportunistic, with optional private courses available at high financial cost. Peer-led teaching is a well-established method of enhancing learning, with benefits including increased learner receptiveness and improved understanding of difficult concepts. We developed a peer-led course, delivered by newly qualified medical registrars, offered free of charge to candidates preparing for the PACES examination.

Methodology:
Experience suggests that candidates feel less prepared for Station 2 (history taking), Station 4 (communication and ethics) and Station 5 (brief clinical consultation) than physical examination stations, which are more easily practised on hospital wards. Recognising the need for candidates to practise these, we designed mock examination scenarios and mark schemes in accordance with those available through MRCP5, specifying the required competencies for each. The voluntary course was offered to all core medical trainees within the region. A three station circuit was run in keeping with PACES examination timings, using medical registrars as examiners, who later provided verbal and written feedback to candidates. Simulated patients were medical students and foundation doctors, theoretically benefitting their own learning and exam technique. Candidates completed anonymous pre- and post-course questionnaires, using Likert scales to evaluate their exam confidence. Data was analysed using a paired t-test. Feedback was sought to evaluate the use of registrars as teachers on the course.

Results:
34 candidates completed the course, with data available from 33 questionnaires. Results suggested that PACES teaching is limited; 42% reported no formal teaching during their postgraduate training. Increased confidence was reported across all three stations with rankings increasing 17.6% (Station 2), 22.4% (Station 4) and 29.6% (Station 5). All were statistically significant (p < 0.05). Feedback was provided.

Discussion:
Peer-led PACES practice is an acceptable teaching method that can improve exam confidence. Peer teaching has mutual benefits as having similar knowledge levels enables peers to clearly explain concepts targeted at the correct level (cognitive congruence theory). This was reflected in our feedback. It provides teachers with opportunities to enhance leadership through course organisation and develop as educators. The course was easily facilitated and highly evaluated by trainees. Given the limited consultant teaching available, peer teaching for MRCP could be an attractive alternative, easily incorporated into postgraduate training. Limitations include a small sample size and lack of data on whether the course improved pass rates. Literature on peer teaching states that: although well received, it is unclear whether overall skills and knowledge are increased. The relationship between student confidence and clinical competence has also previously been disputed. Inevitably pass rates need to be investigated to quantify whether courses such as this improve clinical outcomes. Future work could further explore the effectiveness of near-peer teaching compared with consultant based.

References:
Simulation for General Practice (GP) trainees: improving patient safety in primary healthcare
A Moran, K Watson, F Wedgwood, R Whitnall, R Taibjee, S Calvert
kings college hospital

Background:
This simulation course was designed for GP trainees at a tertiary teaching hospital. It aimed to provide them with training of how to manage medical emergencies in the primary care setting. GP trainees learn how to manage medical emergencies in hospitals. They are inexperienced in managing these same scenarios in the primary care setting. This leads to increased fear and anxiety (1) in an already stressful situation in turn creating patient safety concerns. This training day addresses this by enabling experiential learning in the management of medical emergencies in a simulated primary care setting - a GP practice.

Medical emergencies are rare events in primary care (2) potentially resulting in deskilled health care professionals. Management of emergencies is learnt and so trainees often do not appreciate or know how to manage these same scenarios where access to drugs/ability to get monitoring or basic diagnostic tests are limited. Procedures e.g. drawing up and administering medications are often not practiced in secondary care, where they are often performed by nursing colleagues. In primary care it is likely to be the doctor doing this task. Help may also be harder to access with other colleagues in their own room and not immediately visible. There is the addition challenge of the primary and secondary care interface such as point of referral and where to monitor patient whilst waiting for emergency services.

Methodology:
This potential safety concern was recognised by our local GP educational lead. They approached the post graduate education department / simulation team at KINGS and wrote case scenarios based on real life cases. A simulation course was designed with initial audience targeting GP trainees rotating through the hospital. The simulation lab was designed to create the appearance of a GP surgery with a surgery reception and GP room. Facilities available were representative of those found in a GP surgery, including basic observation monitoring and limited emergency drugs. The simulation course lasted for 3 hours, protected teaching time, with 3 x 45 minute scenarios. An introduction and presentation explaining the role of simulation was given to the candidates with time allowed for them to familiarise themselves with the manikin and simulated GP surgery layout. Each scenario ran for 15 mins with a 30min debrief time, spent analysing the events. A minimum of 2 trainees were involved in each scenario, selected at random, whilst the remaining trainees watched the events via video camera in real time. Participants would also be involved in Participatory Action Research (3) with the training day as the first step in a cycle of learning to assess their current preparedness for managing medical emergencies in the GP setting before outlining action points to improve both their preparedness and that of their working environment.

Results:
A precourse and postcourse survey was given to all trainees to evaluate the training session. Immediate feedback was positive. This was echoed in the post course survey with participants reflecting on their behaviour to identify learning needs and potential quality improvement projects for the GP practices. Subjects also demonstrated an increase in confidence across a range of learning points such as which emergency drugs are available to you. A follow-up survey will be sent at 6 months to identify changes in behaviour consistent with level 3 of Kirkpatrick’s model (4).

Discussion:
Participants valued the day and fed back that further sessions would be of use. Our ultimate aim is for medical emergencies within general practice to be better managed including reduction in error and a better experience for both staff and patient. However, the small number of events per year means it is difficult to evidence this. Taking the course in-situ would highlight any latent errors and ideally involve the whole practice to foster interprofessional team working. As a team we are looking into developing this.

References:

Ref: 045, Board: E5
Simulation in ENT - is it possible to demonstrate an improvement in care for patients presenting with epistaxis?
V Pattni, N Harper, A Hill, A McNutt
University of Bristol

Background:
New junior doctors rotating onto Ear, Nose and Throat (ENT) firms traditionally have little prior knowledge of ENT, possibly due to lack of undergraduate teaching (1). Thus, new trainees often approach common ENT emergencies like epistaxis with poor confidence. Epistaxis is the most common ENT emergency (2) and has the potential to be life threatening for a patient if bleeding is not managed successfully. It is imperative that trainees have adequate training to ensure patients are safely managed. A recent critical incident was reported in our trust where a patient did not have a group and save blood sample taken when they were taken to theatre to arrest their bleeding. Although the patient did not require a blood transfusion, the patient was at risk of delayed transfusion had it been indicated. ENT junior doctors receive an one-day induction at the start of their placements, which consists of traditional lectures to inform students of how to manage epistaxis, including the importance of taking a group and save. In light of the critical incident, an alternative method of teaching through simulation was proposed which could improve patient safety. The study assesses whether simulation could improve the way in which patients with epistaxis are managed, with reference to the rate of group and save blood samples taken.

Methodology:
The project was registered with the local audit department. All adult patients admitted with epistaxis were included. Data was retrospectively collected, before simulation teaching was delivered, from 3/7/16 to 3/10/16. Relevant group and save records were checked on the online patient record system (ICE). Data was also collected on whether the patient had a deranged INR (>3) on admission. A simulated session was then delivered on 16/12/16 for new junior trainees, in addition to the traditional induction. The session involved a 10 minute scenario where the doctors had to manage a patient presenting with epistaxis. This was followed by a 30 minute debrief, where emphasis was placed on the importance of taking a group and save. The group and save rates were then assessed for epistaxis patients presenting between 16/12/16 and 31/12/16.

Results:
48 patients were admitted as inpatients with epistaxis between 3/7/16 and 3/10/16, with an average age of 76. From this cohort, only 2 valid group and save blood samples were taken. 6 of these patients had deranged INRs. Following the simulation, 11 patients were admitted for epistaxis, with an average age of 67. 8 of these patients had valid group and save samples taken on admission. 2 patients had a deranged INR on admission.

Discussion:
Our results show a successful improvement in the rate of group and save blood samples taken for patients presenting with epistaxis following our intervention. Although a causal effect cannot necessarily be demonstrated between these two variables, we propose that using an effective teaching method through simulation has helped facilitate this improvement. Rote learning through lectures does not utilise evidence-based teaching methods and is didactic. From a cognitivist perspective, Ausubel argues that rote learning is meaningless as it does not enable learners to form new cognitive structures (3). Hattie demonstrated that feedback to a student has an effect size of 0.81 on learning (4). The debrief is considered to be the most important part of simulation (5). One way in which simulation possibly improved patient safety is through social learning theory, given the important role of social interaction (6). An important concept of social practice is the community of practice. Here, students would have been able to model themselves on good practice whilst sharing their experiences as a team, which may have contributed to the improvement in patient safety. This study has demonstrated that using evidence-based teaching methods through simulation can have a positive impact on patient safety, thereby reaching the top of Miller’s educational pyramid (7).

References:
2. Shariff Z, Bathalaramanaih S, Venkatesh A. Epistaxis is one of the most common ENT emergencies seen in the Accident and Emergency Department. Surgeon. 2006 Jun; 4(3):189.
TASME 2016- Evaluation of a successful national medical education conference for trainees and medical students
N Dutta, R Najim, A Chu, D Rasa
Royal College of Pysician

Background:
The Trainees in the Association for the Study of Medical Education (TASME) is a specialist interest group of ASME which aims to support trainee doctors interested in medical education. It is run by a national committee of junior doctors. In April 2016 TASME held their 3rd annual conference. This was a one day conference with the aims of getting students and junior doctors engaged and excited in medical education and education research, supporting trainees involved in medical education via poster and oral presentations, delivering educational workshops and providing a forum for networking and collaborative working. The conference was very well attended and had high overall satisfaction ratings.

Methodology:
Two junior doctors led in the organisation of this national conference. There was a very large increase in attendance with 201 attendees, increased from 44 the previous year. The conference was advertised via emails to education networks, local promotion via posters and word of mouth and a social media campaign. This year, in a bid to promote sharing of medical education practice, students and doctors were invited to share their work in medical education in poster and oral presentation format. As well as poster and oral presentation sessions, there were 15 workshops delivered on a range of topics including ‘technology in medical education’, ‘peer and self-assessment’, ‘getting published’ and ‘mindfulness’. Following the conference an electronic feedback survey was emailed with questions including reasons for attending, satisfaction with individual workshops and overall content delivered and suggestions for improvement.

Results:
153 delegates completed the online feedback survey. Most had heard about the conference from a friend or a colleague (73 of 153 respondents, 47.1%). On exploring reasons for attending, the majority of attendees (101 of 153 respondents, 66%) stated that the primary reason was to present work with largest secondary reason being to learn about teaching opportunities (85 of 153 respondents, 56.4%). The conference was well received with 97.3% respondents reporting they would recommend the conference and 95.6% respondents reporting that the conference met or surpassed their expectations.

When asked what delegates would do differently as a result of the conference, there were varied responses included ‘implement new teaching techniques learnt from posters’, ‘seek more opportunities for feedback’ and ‘consider a career in medical education more than ever before’.

Discussion:
This conference was successful in gaining a large increase in attendance to previous years. A large part of this increased attendance is likely secondary to giving trainees and students the opportunity to present their work as supported by the fact that presenting was the most stated reason for attendance. The conference had high overall satisfaction ratings. This successful conference shows there is a large appetite from students and trainees to attend conferences and workshops in medical education. Feedback from this conference will be used in the development of further conferences in medical education.

Ref: 455, Board: E7
The resilience and needs for training of Senior doctors
K Webb, A Bullock, M Stacey
cardiff university

Background:
Medicine is a high stakes profession where errors can have devastating consequences. Hospitals are environments that expect perfection and often require medical staff to perform under pressure without making mistakes. The job of being a doctor is becoming increasingly difficult, yet they are assumed to be resilient or mentally tough. Resilience involves managing cognitive workload, knowing when to call for help and developing strategies for dealing with too much distraction. Our objective was to establish the needs of senior clinicians with regards to resilience and mental toughness training.

Methodology:
Senior clinicians (n=49) working in different specialties across Wales completed an online pre-training questionnaire, which included validated measures, prior to attending an accredited educational training event on mental toughness and resilience (Medic Trauma Risk Management Programme–MEDTRiM). Statistical Analysis used intercorrelational and factor analysis in SPSS.

Results:
Three quarters of respondents reported experiencing a traumatic event in the six months prior completing the questionnaire. The majority of respondents did not display high resilience. Many held beliefs that things happen for a reason and sometimes fate/faith can help. Results indicated a strong professional identity, however this came at an emotional cost, many feeling responsible/embarrassed by failures or institutions/colleagues. Through factor analysis six topics and streams were identified which illuminated shared priorities and similarities in opinion across the different specialties: 1) Strength of character, 2) Fortitude and adaptability, 3) Goal focused, 4) Belief, 5) Director, and 6) Interpersonal relationships.

Discussion:
Senior clinical practitioners recognised the need to make a change. They recognise the need to enhance management of stressful and traumatic situations, wanting to improve their resilience and learn skills in their management of stressful situations, increase confidence and ability to identify risk, educate and provide support to others to improve resilience. Thus being able to effectively neutralise the damaging effects of adverse events both for themselves and the wider team. By providing targeted and context relevant training we can enhance clinicians resilience and mental toughness and improve safety.

Ref: 494, Board: E8
Trainee doctors’ career decision-making: a two group analysis of questionnaire data
K Webb, AD Bullock, L Allery, J Macdonald, E Muddiman, L Pugsley
Cardiff University

Background:
The challenge of deciding on a career pathway in medicine is recognized internationally (1) and it has long been documented that a proportion of trainees make choices they later reject (2). Further, huge numbers of junior doctors leave the NHS, at least temporarily, after completing foundation training (3) and increasing numbers are applying to work abroad (4). One of the aims of the Broad-Based Training (BBT) programme is to help trainees to develop conviction in their choice of career pathway (5). Devised by the Academy of Medical Royal Colleges (AoMRC), BBT follows Foundation training and provides 6-month placements in four specialties: General Practice (GP), Core Medical Training, Paediatrics and Psychiatry. The purpose of the presentation is to report the career decision-making of BBT trainees in comparison to trainees following conventional career pathways in those four specialties. This is an aspect of a wider evaluation of BBT Commissioned by Health Education England/AoMRC.

Methodology:
Online and paper-based questionnaire data were collected from two cohorts of BBT trainees: BBT2013/2014 (n=38; 24) and comparator trainees following traditional training routes (n=42; 48) at two time points (beginning and end of BBT and start and end of “CT/ST” 1 for those on conventional routes). Questionnaires included closed and open questions. Quantitative data were statistically analysed using SPSS; open comments were subject to thematic analysis.

Results:
Decisions about career pathways were made later by the BBT trainees: 59% BBT13 and 71% BBT14 were not sure which specialty to pursue at the outset of BBT, compared with most in the two comparator groups (55%, 50% respectively) deciding in Foundation Year 2, with a sizeable proportion (39%, 37% respectively) deciding during their undergraduate training or before. BBT trainees welcomed the opportunity to gain experience in the four specialties although most (over 60%) of comparator trainees were open to experience in GP, Core Medical Training and Paediatrics, and sizeable numbers open to Psychiatry experience (57%, 48% respectively).

BBT adds 12 months to training. Respondents from both groups provided comment on additional time spent training: “Advantageous as experience is never something to be discounted...Junior doctors need more time to explore and enjoy different specialties” (Comp13); “I don’t see it as a loss of time, but rather a gain of more experience in that year which will make me a more confident doctor.” (BBT13).

Discussion:
Trainees exhibited different priorities and our findings are complex, revealing both within-group as well as between group differences. Theory on decision–making and approaches to uncertainty are useful in understanding these findings (6). More of the BBT group seemed to adopt a ‘positional’ or undeterministic decision-making style. They appeared to be driven not by the simple implementation of a well-defined objective; rather they sought opportunity to develop a position, evaluating experiences as they occurred. BBT provides an avenue for trainees with more generalist priorities (7) and may facilitate immediate and longer term retention within the NHS by enhancing conviction in career pathway choice.

References:
5 RCGP/RCPCH/JRCPTB/RCPSPSYCH (2012) Curriculum for Broad Based Training Programme

Ref: 240, Board: E9
Training for a new kind of doctor: analysis of interview data
D Wride, A Bullock, K Webb
Cardiff University

Background:
It is well documented that the UK has an ageing population (1, 2). With this comes an increase in the prevalence of multi-morbidities (3), which are placing a great financial and physical burden on the NHS (4). To meet these changing service demands, it has been suggested that doctors need to have a training programme that provides them with broader knowledge and a wider skill set (5). The Broad-Based Training (BBT) programme was introduced in the UK by the Academy of Medical Royal Colleges (AoMRC) in 2013 and involves 6-month rotations in Paediatrics, Psychiatry, General Practice and Core Medical Training (CMT) following Foundation training. Its aims include developing clinicians with the ability to deal with more complex patients, an improved understanding of working in conjunction with other specialties and improved career conviction. The purpose of this study was to explore whether BBT equips trainees to fulfil the demand for a more “generalist” doctor, in comparison with traditional training routes. This is an aspect of a wider evaluation of BBT Commissioned by Health Education England/AoMRC.

Methodology:
Between November 2015 and July 2016, telephone exit interviews were conducted with a sample of BBT trainees from the first cohort (n=14 out of 38), as well as their educational supervisors (n=9) who also had experience of supervising trainees following conventional pathways. These were recorded and transcribed. The data were analysed thematically and coded in Nvivo. Ethical approval was gained from Cardiff University.

Results:
All supervisors agreed that BBT trainees were able to provide a more holistic approach to their chosen specialty as a result of the knowledge gained during BBT. They also suggested that BBT trainees were better equipped to deal with the more complex patients, and showed a “wider perspective” in their care provision as a result of an extra year’s experience and exposure to multiple specialties. Several supervisors noted that BBT trainees have a better understanding of communication between specialties, and the ability to communicate between primary and secondary care. There was also a suggestion in the data that BBT trainees appeared to be “more focussed and interested” as well as more self-directed than their traditional route counterparts. One commented: “They were an answer to the future of the training in my view, or the future specialists.”
BBT trainees widely regarded BBT as a very positive experience. The majority reported that BBT improved their career conviction, and that the extra time to decide was one of the most important factors in deciding to apply for BBT initially. Almost all reported how they had applied in their current specialty, knowledge that they had acquired from experience in the other specialties in the BBT programme, and suggested that they provided a more holistic approach to their care as result. They agreed with their supervisors that having an improved understanding of inter-specialty communication was a particularly useful outcome of BBT. Many reported increased confidence in managing complex patients and in decision-making.

Discussion:
From the perspective of both trainees and supervisors, BBT offers good preparation for later specialty training, and provides trainees with a knowledge base and skill set that allows them to deliver a more holistic approach to patient care. This could help to fulfil the growing demand on the NHS from complex, co-morbid patients. The data suggest that the programme fosters an understanding of the interface between specialties that benefits patient care. These initial findings will be explored in further interviews with supervisors.

References:

Ref: 469, Board: E10
What are the perspectives of Foundation Year 1 (FY1) doctors, of the medical Post Take Round (PTWR) as an educational tool?
A Brereton,
Department of Medical Education, Brighton and Sussex Medical School, 344a Mayfield House, Falmer, Brighton.

Background:
Patients admitted to hospital, in the United Kingdom, with acute medical problems are clerked by the admitting ‘on call’ team and then reviewed by the Consultant on the PTWR. During the PTWR, clerking doctors are expected to present the patients that they have seen. In this setting the stage is set for dialogue between novice and expert whereby the FY1’s performance can be reviewed in terms of knowledge, diagnostic reasoning, safe prescribing, communication skills and professionalism. It has been suggested that large discrepancies between Consultant performances on the PTWR may underpin the array of junior doctor sentiment regarding its value.1 Capped gross working hours, following the introduction of the European Working Time Directive (EWTD), have been reported as a barrier to learning.2 This research study aims to explore how FY1 doctors view the Consultant-led medical PTWR, as an educational tool?

Methodology:
This study was conducted at a district general hospital in the United Kingdom. Focus group participants were recruited using a purposeful sampling approach. The author facilitated a semi-structured focus group n=6 (4 female and 2 male), exploring FY1 doctors’ views around the research question. A single semi-structured focus group lasted 45 minutes and was audiotaped. A written transcript was produced and checked by the participants for accuracy. The study gained ethics approval from University College London Ethics Committee. Thematic analysis was used to analyse the transcripts and the notes written during the focus groups: guided by both themes identified in the empirical and theoretical literature and by emergent themes3. The author acknowledges that as the principle investigator, an educationalist and an acute medicine higher speciality trainee, I had several conflicting roles that may have impacted on the conduct of this study and the data it generated.

Results:
Thematic analysis revealed the following core themes:
Behaviour and attitudes;
• Important to FY1 doctors that the Consultant was approachable and punctual so that they felt comfortable enough to ask questions and did not miss learning opportunities.
• There was a perceived reduction in educational value if a Consultant’s main priority was to review all patients, as quickly as possible (time pressures/other clinical commitments).
• Self-perception of a high workload led FY1 doctors to prioritise completion of the ward round’s jobs list over accessing learning opportunities.
Roles;
• FY1s coordinate the operational aspects of the PTWR. This role was perceived to impact negatively on learning as by running errands one would miss out on observing various aspects of patient care.
• FY1 doctors perceived clerking to be a good way to learn and receive feedback. However current rota patterns frequently resulted in FY1s attending the PTWR who hadn’t previously clerked any of the patients.
Team working;
• If the Consultant had prior knowledge of their PTWR team (e.g. it was his/her regular ward clinical team) then there was a perceived increment in learning opportunities.

Discussion:
The usefulness of the medical PTWR as an educational tool is dependent on the interplay between the FY1 doctor (learner), the Consultant (teacher) and the clinical environment. In this study, the Consultant’s attitude towards their educational role during the PTWR was seen as critical to its educational success. Additional barriers to learning included; the effects of the current medical rota which had removing clerking duties and hence the opportunity for feedback receipt. Secondly, the disruption to the process of learning in familiar teams whilst ‘on-call’ had removed opportunities gained by learning through legitimate peripheral participation.4 Local faculty can improve learning on the PTWR, for FY1s, by influencing Consultant educators and rota planners alike. Otherwise training on the PTWR will become subservient to service provision.

References:
What is it like being a trainee in an under-recruiting specialty?
K Yu-Ching Chang, J Cleland, P Johnston
University of Aberdeen

Background:
There are currently 65 medical specialties and 32 subspecialties approved in the UK. This variety offers the individual doctor considerable flexibility in selecting specialty choice. This may be desirable for the doctor but is arguably less so for the NHS given under-recruitment in a number of specialties and localities, as well as substantial rise in clinical demand and workload exceeding capacity. Anecdotal evidence and workforce data suggests that knowing a department is short of trainees detracts other trainees from applying. In this way, under-recruitment leads to further problems with attracting trainees. This threatens the reliable delivery of care in the immediate term as well as having long-term implications of too few trainees progressing to consultant grade. With this in mind, our aim was to explore the experiences of training in an under-recruiting specialty.

Methodology:
This was a qualitative interview study using interpretative phenomenology to give a detailed and nuanced account of the experience of being a trainee in an under-recruiting specialty. One-to-one interviews were carried out with nine participants in two under-recruiting specialties (Anaesthetics and Emergency Medicine [EM]) within one UK training region in early 2016.

Results:
We found that most of our interviewees were satisfied with their training overall. However, common issues which coloured their views of training included: formal teaching not being prioritised or protected; rotas and workload; and the loss of senior trainees as second on-call. The last of these was viewed as the loss of a valuable training opportunity for honing critical decision-making skills. Department support was seen as crucial to supporting training where there is a shortage of trainees.

Discussion:
Trainees in under-recruiting departments seem to be protected to some extent by senior staff awareness of these common issues, and their associated increased support for trainees. However, just how sustainable is this “belt and braces” approach as even fewer more training posts remain unfilled and senior trainees complete? Drawing on our wide programme of research into medical careers decision making, we will discuss how best to support those currently in training posts and how to entice others into training in currently unpopular specialties.

References:
Teaching prescribing: it’s everyone’s job
M O’Sullivan, C Hinton
St. Michael’s Hospital

Background:
Prescribing continues to be an area that many medical graduates find challenging and anxiety-inducing. Not only is prescribing a complex task that involves knowledge and understanding of physiology, pathology and pharmacology it is also an area where errors can have serious consequences. A 2009 GMC-commissioned study¹ highlighted that 9% of hospital prescriptions contained errors, a large proportion of hospital prescriptions are written by Foundation Doctors. Although most prescription errors are intercepted by senior doctors, nurses and pharmacists before patients can come to harm, this high error rate led to the advent of the Prescribing Safety Assessment (PSA) in for UK final year medical students from 2015. Undergraduates feel unprepared for taking on their roles as prescribers.² There is now more of pressure than ever to prepare students for the PSA and working life but much of this is focussed on their final year of study. We wanted to see how students would respond to integrating practical prescribing teaching into their year 4 obstetrics and gynaecology attachment.

Methodology:
We chose a straightforward early pregnancy case of a young, healthy woman being admitted to hospital with hyperemesis gravidarum. The first part of the tutorial involved discussing the pathophysiology of hyperemesis and the management in terms of assessment, investigation, fluid resuscitation, anti-emetics and vitamin replacement. Students were provided with a BNF and blank drug charts and asked to prescribe the patient’s treatment. Two clinical teaching fellows (O&G ST3+) were available to circulate the students, check prescriptions and provide guidance. Correct prescriptions were then discussed and “ideal prescriptions” provided.

Results:
Students rated the usefulness of the session overall as 8.94 (1-10). Students’ confidence improved for prescribing fluids, anti-emetics and analgesia. The biggest improvement was for the prescribing of fluids (2.6 pre-teaching 6.5 post-teaching), confidence for prescribing anti-emetics improved from 3.6 to 7.5 and for analgesia from 4.8 to 8. The free written feedback was overwhelmingly positive with students praising the practical and interactive nature of the session, students felt that more sessions of this nature were needed in their curriculum and that they wanted to have more O&G cases to work through.

Discussion:
Prescribing is a vital skill that can be difficult to teach and assess. Sound knowledge and prescribing ability is important to keep patients safe. Although prescribing is now much more at the forefront of medical education it is often left to the final year. Our pilot teaching session demonstrates that prescribing can easily be integrated into specialty teaching and students enjoy and are receptive to this teaching before their final year. Repetition and practice is key and we plan to introduce more prescribing within our O&G teaching to allow students to begin to formulate good principles for safe prescribing.

References:

Ref: 234, Board: E13
"Physician heal thyself" Can reflective writing improve resilience amongst medical students?
J Fukuta, A Sahni and J Morgan
Southmead Hospital, North Bristol Academy, University of Bristol

Background:
There is a growing realisation that the healthcare profession is encountering an increasingly stressful environment leading to burnout and dissatisfaction amongst healthcare professionals (1). A cascade effect appears to be taking place, with estimates of up to 50% of medical students suffering from burnout during their course (2). Therefore, strategies are being sought to help students and professionals cope better with these stresses. The concept of helping medical students and professionals self-manage their stress is often termed resilience training. There is now an increasing understanding that resilience can be interconnected with reflection in the model of the new 3 R’s: relationships, reflection and resilience (3). The 3 R’s theory hypothesises that by reflecting on experiences within both professional and personal lives, it is possible to maintain one’s own wellbeing.

Reflection already forms part of medical education and studies have shown that teaching medical students about reflection can help them gain an improved receptivity to reflecting and its importance (4). However it is unclear whether students understand that reflection can be employed as a method of improving resilience. The aim of this study is to ascertain whether students feel they receive sufficient guidance on how to perform reflection and to see if a reflective writing workshop may improve perceptions regarding reflection and subsequently students’ resilience.

Methodology:
We have designed a reflective writing workshop which will explore different reflective techniques. We will run the workshop a total of four times and invite 97 medical students to attend. At the workshop the students will be asked about their opinions, the regularity of any reflection they do and their confidence regarding reflection. The students will also be asked to fill in a questionnaire which will be used to calculate their current resilience using the DRS – 15 scale, a tool used to assess resilience (5). After the workshop, they will be asked whether their opinions on reflection have changed. After 10-14 weeks, the students will be invited to fill out the DRS – 15 scale to see if their resilience has improved. The students will also be invited to a focus group to discuss whether they found the reflection workshop specifically or reflective writing in general has helped them.

Results:
Regarding reflective practice our preliminary results show that only 39.3% (n=66) of students have had formal teaching on reflection. Prior to our workshop students had a confidence of 2.7 on the 5-point Likert scale which improved to 3.7 after the workshop. We are awaiting the results on the resilience scores and the focus groups are due to take place in March 2017.

Discussion:
We have identified that students do not appear to get formal reflective writing guidance within our institution. The workshop also appeared to improve the students’ confidence in writing effective reflections. We hope to find that students’ resilience may be improved with the use of reflective writing and establish whether it could be used as a potential tool to maintain the welfare of our future healthcare professionals.

References:

Ref: 246, Board: F1
Establishing Medical Students’ Identity Through Clinical Debrief: Do Patients Benefit From Bedside Teaching?
N Jordan, M Abdullah, L Bagg, E Cox, M Betts, S Jie Goh, V Koonjal, H Roberts Dear, C Sattentau
University of Manchester

Background:
In the 2016-17 academic year Manchester Medical School introduced a novel teaching and learning session, ‘Clinical Debrief’. Content is entirely student led, derived from experiences in the clinical environment and run with groups of 6-8 Year 3 students facilitated by trained GPs.
‘Clinical Debrief’ has three main aims: to develop clinical reasoning skills, provide a safe environment to debrief on the week’s events on the ward and preparation for practice through developing professional identity.
This poster arose from recurring discussions within one group. The students, newly embarking on the wards, felt concerned that patients were often objectified during bedside teaching. Although models already exist (Janicik & Fletcher 2003), the group’s anecdotal experience suggested that doctors were often insensitive and participation created anxiety for patient, this led to the question: do patient’s benefit from bedside teaching?

Aim
To demonstrate how the ‘Clinical Debrief’ process allowed a group of students to explore patients’ attitude to involvement in bedside teaching and develop evidence based guidance to improve the experience for patients.

Methodology:
A literature review was undertaken to identify existing work in the field. Within the ‘Clinical Debrief’ group the results were used as trigger material for discussion and to establish arguments for and against patients’ involvement in opportunistic bedside teaching.

Results:
Results of the literature review will be presented along with the group’s conclusions. Seven simple steps were developed to maximise benefits for the patient: these are represented by the acronym BEDSIDE.

Discussion:
The clinical environment can be overwhelming and this work demonstrates how ‘Clinical Debrief” provides an essential opportunity for learners to not only reflect on difficult experiences but also utilise this to ‘trigger transformative learning’ (Mezirow 1981).
Furthermore, despite bedside teaching being deeply ingrained as commonplace in medical school the early years clinical student provides an essential empathetic perspective (Hojat et al. 2009) and we should seek to utilise this as a means to identify how teaching practices can be improved for all stakeholders. Further research is now planned to evaluate student experience of bedside teaching.

References:
Extending Medical Professionalism: Preparing doctors to influence on a system and society wide level.

M Gregory, B, Downie, M Elliott, A Williamson, N Kumar
Health Education England, North East

Background:
Medical professionalism is a concept in a state of constant evolution, both from within the profession, and externally from societal and government pressure. Both undergraduate and postgraduate professionalism education is heavily focused on the GMC’s Good Medical Practise guidelines (1). The topic is therefore approached from a regulatory perspective and consequentially trainees develop a restricted understanding of their professional responsibilities. In addition to Good Medical Practice, trainees must appreciate the wider context of medical professionalism. Trainees need a strong appreciation of where the profession sits within the NHS and society, and the reasons underlying the position, to allow them to understand the full extent of their professional responsibilities. In so doing, we can produce trainees with the capacity to influence the health system as medical professionals, rather than simply producing doctors with knowledge of their profession’s regulations.

The purpose of this work is to deliver a novel and ambitious program of professionalism training, challenging trainees to critically assess the concept of medical professionalism with the aim of extending their professional identity.

Methodology:
The course has been designed and managed by Leadership Fellows at Health Education England, North East (HEENE). All trainees working in the North East will be eligible to attend. The training will be delivered as a 2 day course, with capacity for 60 trainees in total.

Course content will include didactic teaching and facilitated group discussion around the following 8 topics:

• Doctors. What do we do? Why do we do it? What should we really be doing?
• Medical professionalism: Who is in charge?
• The history of the profession: how did we get here?
• Conflict with Management: Have our predecessors let our profession down?
• Clinician autonomy and accountability: Out of our hands but still our responsibility?
• Filling the paternalism crater: What is our role in shaping the national healthcare debate?
• Medical professionalism in the media: Understanding the media agenda and engaging on our terms.
• An Introspective look at medical professionalism: In what areas should the profession evolve in the future?

Program content will be evaluated with course feedback, and pre and post course questionnaires will be used to assess learning. Output from the facilitated group discussions will be recorded and will form a qualitative study into trainee views on medical professionalism. Appropriate ethical approval has been sought.

To facilitate long term development of trainees, participants will be invited to join a pilot ‘leadership alumni’ scheme, with opportunities to participate in leadership development projects within the region. In this way the future development of attendees can be followed in the future.

Results:
Results will be presented from the course evaluation, pre- and post-course questionnaires, and the qualitative study into trainee views on professionalism. Progress from the pilot ‘leadership alumni’ scheme will also be presented.

Discussion:
This is a progressive program with a novel approach to teaching medical professionalism. The course has the potential to be expanded for delivery to all trainees in the North East. Concepts from this project could easily be incorporated into other professionalism teaching programs. In this way there is potential to expand medical professionalism teaching beyond a limited regulatory based approach, to the benefit of the profession, the health service and the patients we serve.

References:
(1) GMC, Good Medical Practice (2013).
General Practise Test of Competence assessment modalities: the unique contribution of Simulated Surgery
Hirosha (Keshani) Jayaweera, K Keshwani, M Baker, A Sturrock
UCL Medical School

Background:
The General Medical Council (GMC) conducts Tests of Competence (ToC) for doctors who are referred for fitness to practise (FtP) following concerns around their performance at work (1). GPIs undertake a 120 item single best answer knowledge test, a twelve station OSCE, and a Simulated Surgery (SimSurg) assessment which consists of ten stations each with a simulated patient consultation with a presenting complaint, which has been devised to reflect how GPs work in practice (2). This is in contrast to ToCs for other specialties which only has two assessments (a knowledge test and an OSCE). Having three assessments may increase stress for candidates and are associated with increased workload for assessors. Furthermore, the similarities between OSCEs and SimSurg have been previously examined qualitatively via questionnaire of assessors presiding over GP ToCs. The findings from this study indicated that assessors perceive SimSurg to assess many of the same competencies as an OSCE, with OSCEs being viewed as a better assessment of specific skills whereas SimSurg was perceived to provide an overall impression of GP ability. We were interested in finding out whether similar findings also emerged when examining the quantitative data from the GP ToCs in terms of ability of each assessment to predict FtP outcomes. Hence the aim of this study is to examine the unique contribution of each assessment in predicting one of three outcomes following a ToC, namely being erased/removed from the register, having restrictions/conditions on the GMC registration, or be in good standing without conditions.

Methodology:
154 general practice (GP) doctors underwent a ToC between February 2010 and October 2016. Statistical analysis including between-subjects ANOVA examining group differences, and linear regression with performance on each assessment as a predictor of FtP outcome was conducted on the doctors’ performance, summarised a percentage score in each assessment.

Results:
Of the 154 GPs, 65 were no longer on the GMC register (group 1), 50 were on the register with warnings, conditions, suspensions, and/or undertakings (group 2) while 39 were on the register in good standing (group 3). There were overall significant group differences in the assessment scores when examining doctors from different outcome categories for the knowledge test \((F(2,151) = 25.34, p = 0.001)\), OSCEs \((F(2,151) = 23.14, p = 0.001)\) and SimSurg \((F(2,151) = 27.0, p = 0.001)\). There were significant negative correlations between the outcomes of ToCs and all the assessments with moderate to large effect sizes, \(p = 0.05\). An overall regression model, with the knowledge test, the OSCEs and SimSurg scores as predictors of the occurrence of various outcomes was significant, accounting for 28.7% of the variance in outcomes, \(F(3,150) = 21.48, p = 0.05\).

Discussion:
Findings from this study indicate that when examined alone, performance in all three assessments is related with final FtP ToC outcomes, warranting the inclusion of all three assessments in future GP ToCs. However, SimSurg was found to be a better unique predictor of FtP outcomes compared to the OSCEs, when taking the effect of overlap between the assessments into account. This is consistent with the view of GP assessors from our previous qualitative study who reported that SimSurg provides an overall impression of GP ability and has higher fidelity to clinical practice.

References:

Ref: 015, Board: F4
Medical graduates’ professional identity formation: a qualitative longitudinal analysis
K Thomas, S Wells, A Bullock, L Monrouxe
Cardiff University

Background:
Professional identity relates to the extent to which individuals identify with their professional group. (1) Doctors’ professional identity partly develops through participation in clinical placements. Yet in the UK, conventional placements rarely give students responsibility for patient care and decision making. (2) To address this, and support their transition to practice, the GMC required the introduction of student assistantships in the final year of medical school. (3) Student assistantships are “a period during which a student acts as assistant to a junior doctor, with defined duties under appropriate supervision.” (3) The purpose of this study was to explore how doctor identities develop over time, from assistantship to the end of their first year as a junior doctor.

Methodology:
A longitudinal qualitative interview study (n=11) at four time points following ethical approval: medical students during assistantships (T1, June 2015), then as a junior doctor in their first job (T2, September 2015), in their second job (T3, January 2016) and as a supervisor to a student assistant (T4, June 2016). At each time point they were asked ‘Do you feel like a doctor yet?’ Interviews were recorded, transcribed and analysed using a framework approach. (4) A coding framework was developed inductively from the data.

Results:
All participants’ professional identity developed over time, with them increasingly ‘feeling like a doctor’. The main factors influencing participants’ identity formation were: confidence, responsibility, decision-making, knowledge, and independence. Influence was both facilitative and inhibitory. For example, making decisions about patient care increased their doctor identity; limited opportunity for decision-making curtailed this. In addition, many participants described how assessing acutely unwell patients and working in the “on call” setting had been formative in the development of their professional identity. Participants developed their identities at different rates with some taking longer to identify with their profession than others. Some participants described themselves as “frauds” or “imposters” (known as imposterism) (5) and found it “odd” to hear or see “Dr.” in front of their name whereas others only felt comfortable identifying as a doctor when this was qualified as being a “junior” doctor.

Discussion:
The development of a professional identity as a doctor takes time. Central to this is the taking on of increased responsibility for patient care and clinical decision-making. Clinical decision-making was discussed as being an opportunity to gain confidence, and to begin the shift from peripheral involvement to being at the centre of activity. (6) Our study reveals how this process continues throughout the junior doctor years as professional identity further develops. Findings add to the literature concerning factors that might affect how professional identity develops and the place of assistantships in this process. Future research might consider the prevalence of imposterism and whether some individuals are more susceptible to it and the impact of imposterism on their identity formation over time. (5)

References:

Ref: 332, Board: F5
Perceptions of honesty and emotions in medical student reflections
L Ghani, M Stanyon, N Salooja
Imperial College London

Background:
The General Medical Council, has recommended that all medical students be taught to teach and to reflect. Furthermore ‘Good Medical Practice Guide’ from the GMC states that, ‘you should regularly reflect on your own performance, your professional values and your contribution to any teams in which you work’ [1]. Despite this little guidance is given to the medical profession about how to reflect. As a result there is a lack of clarity about the role and importance of identifying and writing about emotions in reflective work. Furthermore, reflection is not always valued as a process by those undertaking it and our impression from teaching medical students how to reflect is that it is seen as a compulsory but redundant activity. Moreover recently concerns have been raised by our students about the extent to which they are prepared to be honest in professional portfolios [2].

Our research aims are to; 1. Investigate medical students’ perceptions on the value of reflection and emotions in reflection, 2. Consider how important honesty is in reflecting.

Methodology:
We conducted a focus group with penultimate year medical students. Transcripts were coded and thematically analysed by two researchers and themes were discussed to consensus. Ethics committee approval was obtained and students were recruited through a compulsory teaching skills course.

Results:
Five medical students were recruited (all female). Four major themes were identified in relation to emotions and honesty in reflections; (1) that the content of reflective writing was influenced by the context and format e.g. whether it was personal vs professional and verbal vs written and that (2) emotional aspects of reflection were different in verbal and written reflection. For example, in professional verbal reflections such as in debriefs with their clinical tutors the students were forthcoming with their emotions whereas in written professional reflections they felt an emotional filter was applied.

Other themes included; (3) honesty as the students perceived this to be important in reflection however barriers were identified to absolute honesty in a professional context. The final major theme (4) related to practical aspects of reflection such as lack of training and feedback in professional reflective writing.

Interestingly the students acknowledged that feedback and reflection may be used interchangeably but are not necessarily the same; furthermore, by making reflection voluntary and encouraging creativity student participation may increase.

Discussion:
Our results show that students demonstrated an awareness of the value of verbal and written reflections and appreciated the different contexts in which they apply. Additionally, the students utilised emotion differently depending on whether the reflection was verbal or written. Students valued verbal face-to-face reflection and felt they were more likely to be honest in this setting. Honesty in written work was hampered by fear of medico-legal repercussions and this needs to be addressed given the emphasis of written reflection in appraisal and revalidation at all stages of professional development.

References:

Ref: 370, Board: F6
Resilience Awareness Session for Medical Students Transitioning to Clinical Placements: Design, Outcomes and Progress to Date.

C Sharratt
Undergraduate Medical Education Department, Nottingham University Hospitals Trust, UK

Background:
Students entering the clinical phases face new challenges whilst having reduced contact from the university-based support team. The literature recognises this transition as a stressful time for students (1). There has been recent discussion around improving resilience levels in medicine, particularly that of students and junior doctors (1,2,3). The GMC’s promoting excellence: standards for medical education and training document recommends that students have access to pastoral support, with an emphasis on supporting students to take responsibility for their own wellbeing (4). Creating a session highlighting the importance of resilience is therefore perfectly suited to this stage in training.

Methodology:
The session was delivered as part of an existing 2-week introduction to clinical practice course to all student groups commencing Clinical Phase 1 (CP1) placements at Nottingham University Hospital, City Campus. This complimented an existing didactic lecture on pastoral care. The session blended traditional small group teaching activities with interactive voting software. Interactive small group tasks included “what is resilience?” (word cloud) and “what makes someone resilient?” (discussion) alongside subject matter including: resilience in the NHS and why do doctors need to be resilient?

Feedback collated used a Likert scale questionnaire (1 = very poor, 5 = excellent) to assess learner satisfaction of content, structure and delivery of the session. Free text questions were used to capture students’ perceived key learning points and immediate reflections.

Results:
Over 90% (n=47/52) of students completed the feedback, with 100% of students stating they would recommend the session to a peer. The students felt the session was relevant to their medical training (Likert score 4 or 5/5 n=43). The majority of students also felt the session was enjoyable (n=43/47), with clear goals (n=43/47), high quality visual aids (n=45/47) and tasks (n=43/47) (Based on a Likert score of 4 or 5/5).
The majority of students answered at least one of the qualitative questions (n=45/47), however no student completed all five. Key themes identified from qualitative analysis on perceived learning points included: definition of resilience, factors influencing and subsequent strategies to improve resilience, reflections on personal resilience levels and resilience in the NHS. These themes suggest some students progressed along Bloom’s affective domain beyond “receiving phenomena”, along to “valuing” and even up to “internalising values” (5).

Discussion:
Students’ reactive feedback supports the need for a resilience awareness session at this transitional training stage. Themes from qualitative data analysis suggest students gained a greater understanding of the issues around resilience, but most importantly reflected on strategies to improve personal resilience levels and change individual behaviours.

Future developments include improving and expanding the session for delivery in 2017 to all CP1 students across the trust. The trust is working in partnership with the University of Nottingham to include this session as part of a wider blueprint of pastoral care sessions to be delivered longitudinally along the curriculum (6). The blueprint (still in development stages) aims to tailor sessions according to the specific needs and training stage of each year group. A 12 month follow-up survey of students who undertook the session will be undertaken to review their attitudes and behaviours and enquire about the long term value of the session.

References:
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5: Kratwohl DR, Bloom BS, Masia BB. Taxonomy of Educational Objectives, the classification of educational goals – handbook II: Affective Domain. New York: McKay; 1964.
Graduate applicants to UK medical schools: a national cohort study.
B Kumwenda, R. MacKenzie, J. Cleland, G.Prescott
University of Aberdeen

Background:
In 1997, the UK Medical Workforce Standing Advisory Committee (MWSAC) recommended that one way of recruiting future doctors is by enrolling graduate applicants into medical school1. Encouraging graduates into medicine was also seen as a means of increasing the socioeconomic diversity of medical students 2,3. Since the establishment of graduate entry to medicine programmes in 2001, there has been much interest in comparing the nature and outcomes of graduates versus the more traditional (in the UK at least) non-graduate population of medical students. However, most studies on this topic are from a single-site, limiting comparisons across medical schools and programmes. Thus, the aim of this study is to examine if encouraging graduates into medicine has had an impact on the socio-economic profile of the medical student population.

Methodology:
A large-scale longitudinal study of applicants to UK medical schools between 2006 and 2014. Data were matched from UK Clinical Aptitude Test (UKCAT) and Universities and Colleges Admission Services (UCAS) datasets. Univariate analyses were run to compare applicants’ socio-demographic variables, particularly those associated with widening participation (WP). The main outcome measures were applicants’ pre-entry grades, UKCAT performance, and whether applicants received offers or not. A multiple logistic regression analysis was employed to predict the odds of getting an offer based on graduate qualification status, after accounting for the differences in UKCAT scores.

Results:
The number of graduates applying to medical school steadily increased between 2006-2014. There were no statistically significant differences in socio-economic status and type of school attended, with the vast majority of applicants being from the highest socio-economic group whether they be graduates or school leavers on entry to medical school. Among applicants offered places, graduates had a higher mean UKCAT score than non-graduates. After adjusting for UKCAT score, the odds ratio of an offer for graduates vs. non-graduates was just under 0.5.

Discussion:
The commitment to increase diversity in the medical profession seems to have encouraged graduates to apply to medical schools, but this has not improved their relative chances of getting in. Disadvantage still exists for graduate applicants. Graduate and non-graduate applicants do not differ on various markers of diversity, and this suggests that graduate entry programmes do not seem to have led to significant changes to the socioeconomic profile of the UK medical student population.

References:

Ref: 119, Board: F8
Identifying and addressing the challenges of widening participation in medical education
A. Bisel, K. Murphy, A. Alexander, S. Smith
Imperial College London

Background:
Students from non-traditional backgrounds are underrepresented in UK medical schools. Despite measures from UK medical schools to provide support to potential applicants from this cohort via outreach schemes, applications and subsequent medical students remain the lowest of any profession in the UK. Those students from non-traditional backgrounds that do successfully obtain a place at a UK medical school are also at the greatest risk of non-completion.

It is unclear at what stages students from non-traditional backgrounds are unsuccessful (both in terms of aspirations and achievement) in accessing/completing medical education or what the actual challenges they face are. It is unknown, for example, whether perceived challenges are greater than actual challenges, and which disparities in the challenges faced by non-traditional students compared to their more traditional peers are most important.

Current strategies aimed at tackling this issue are wide and varied, and currently lack evidence of their effectiveness. The sector therefore does not currently know what the best strategy is to widen access to medical education.

Methodology:
This research will use a mixed methods approach, combining the use of retrospective application data with new data collected via interviews, focus groups and questionnaires. The interviews primarily involve a qualitative analysis of the experiences of current undergraduate medical students at Imperial College London’s School of Medicine. Using a semi-structured one-to-one interview approach, we will aim to identify the pre-entry and on-course challenges perceived by a cross-section of the medical student body to identify trends and variances in students’ experiences.

We are developing a thematic analysis to draw out the factors identified as perceived pre-entry and on-course challenges by the current students that were interviewed. We will use demographic data that the College has about each student to determine whether they are classed as a traditional or non-traditional student which will assist us in identifying any variance in the challenges perceived by these two cohorts. This information will then be used to inform the content of questionnaires and focus groups which will be used with pre-entry students and to make recommendations to the School of Medicine in regards to the pre-entry and transitional support provided to applicants and students.

Results:
Results from student interviews will be presented as will initial analysis from retrospective data. Early findings suggest that there are disparities between the information, support and advice received between students from traditional and non-traditional backgrounds not just when applying to university but also when transitioning between key stages. On-course knowledge and expectations also appear to vary between different cohorts of students.

Discussion:
A key early conclusion is that more needs to be done by medical schools to support non-traditional students in gaining accurate information, advice and guidance at an earlier stage in their education and in their transition to university.

It is intended that delegates will be able to use the findings of the student interviews regarding the applicant journey, transition and support available during their studies to reflect on their own institutional practices and provide transferable information about student perceptions and support requirements.

Ref: 477, Board: F9
The relationship between UKCAT scores and Finals exam performance for widening access and traditional entry students.
K Srikanthikamanathan, S Curtis and B McManus
University of Southampton

Background:
The admissions process into medical school is an integral part of medical education, ideally it should reliably identify whether the applicant has the qualities and capabilities to become a competent clinician. The UK Clinical Aptitude Test (UKCAT), introduced in 2006, is a cognitive skills test consisting of four subtests (verbal reasoning, quantitative reasoning, abstract reasoning and decision analysis), which aims to provide UK medical schools with an objective measure to help screen large numbers of applicants with similar grades. At the University of Southampton’s Medical School, the selection process varies between programmes. For the traditional entry programme (BM5) UKCAT scores are used to rank applicants with the highest scoring applicants being invited to selection days, whereas for the widening access programme (BM6), non-academic criteria are used to score applicants prior to invitation to selection days. A study by Husbands et al. suggested UKCAT scores better predict exam performance in later years of medical school compared to exam performance in earlier years. In 2013, Yate and James found statistically significant correlations with total UKCAT scores and Verbal Reasoning Subtest scores with final year exam performance from Nottingham medical school. However, a comparison of the relationship between UKCAT scores and final examination performance for widening access and traditional entry students has not yet been reported. The aim of this study is to investigate the relationship between UKCAT scores and finals examination performance and to determine any differences in the correlations between BM5 and BM6 students from the University of Southampton.

Methodology:
This retrospective, cohort study examined the correlation between the UKCAT scores and the total Finals examination performance measure (FPM) and its component examinations for BM5 and BM6 students who entered Year 1 in 2009 using IBM SPSS Statistics 22. The raw scores were converted into z-scores, standardising the data. Pearson’s product moment correlation was applied once normal distribution was ascertained. Analysis was undertaken without the adjustment for socio-economic confounding factors.

Results:
There was a significant correlation between the BM5 UKCAT total score and the multiple choice question paper (MCQ) component of the Finals examination \( r = 0.254, P = 0.01 \), \( n = 183 \). Of the UKCAT subtest scores, Verbal Reasoning correlated with the BM5 overall FPM \( r = 0.226, P = 0.01 \), \( n = 183 \) and the MCQ component of Finals \( r = 0.236, P = 0.01 \), \( n = 156 \). There were no correlations between the UKCAT total or subtest scores with BM6 FPM or its component examinations.

Discussion:
The significant correlation between the UKCAT score and the results of the MCQ component, and the Verbal Reasoning sub-test score with MCQ and FPM for the BM5 cohort supports the use of UKCAT in the admissions process. However, the results also suggest a re-evaluation of how the UKCAT results are used with potentially more weighting given for the verbal reasoning test. The absence of significant correlations seen for the BM6 cohort suggests that not including UKCAT scores in the widening participation admissions process is appropriate. However, these results should be interpreted with caution, as the BM6 cohort size was too small to draw firm conclusions from and only one year of data was analysed. Future studies with multiple cohorts would provide more robust data.

References:
1. UKCAT. What is the UKCAT. [Accessed 04 January 2017].
2. Recruitment and Admissions Committee. Selection Procedure and Policy for the Faculty of Medicine, BM4, BM5 and BM6 Programmes. University of Southampton. 2016
Selection

Ridening participation in medicine: observing the outcome of medical school applications of those from underrepresented backgrounds
R Lethem
University of Bristol

Background:
The importance of widening participation in medicine has become increasingly recognised. Beyond empowering individuals from underrepresented backgrounds to enter the field of medicine, it follows that a more widely represented medical workforce is better equipped to deal with the challenges of an ever diversifying population.(1) As such, widening participation initiatives have become an increasingly prominent feature of medical school selection.(2) For example, some medical schools have allocated a guaranteed fixed amount of interview places for applicants from underrepresented backgrounds.(3) However, increasing the number of widening participation initiatives does not solely translate to increasing widening participation in medicine. This study aims to observe the outcome of medical school applications of those from underrepresented backgrounds, notwithstanding the increased widening participation initiatives on offer. It therefore seeks to evaluate the effect of such initiatives and identify any possible areas for improvement.

Methodology:
A cohort of applicants from underrepresented backgrounds was compared with a control cohort. The demographic determinants of the cohorts used in this study was based on household postcode, school or college attended, and whether the subject’s parents had attended university. Participants of both cohorts were recruited from medicine-themed summer schools, held across two locations in the South West of England between 2013-2015, and aimed at pre-university students that had previously expressed an interest in applying to medical school. Data was collected via an online questionnaire. Participants were asked how many medical school interviews they had received, and how many medical school offers they had received in total, across all medical school applications, including previous unsuccessful applications. The results were tabulated to give a statistical comparison between the two cohorts based on the number of interviews, the number of offers, and the proportion of offers relative to interviews, in order to give an indication of the ability of participants to convert interviews into offers.

Results:
The cohort containing those from underrepresented backgrounds was able to obtain more interviews per person compared to the control group (mean difference= 0.62 (0.85, 0.39; p=0.01)), however it was far less successful at obtaining actual offers for a place at medical school (mean difference= -0.39 (-0.28, -0.50; p=0.04)). As such, the ability to convert interviews into offers was far greater in the control group. In addition, a third of the cohort containing those from underrepresented backgrounds failed to convert any of their interviews into offers, compared to just 3% in the control group. A full list of results for each cohort regarding interviews, offers and conversions will be presented.

Discussion:
The results of this study suggest those from underrepresented backgrounds are better able to obtain interviews for medical school. This is a positive outcome, which may be used to break down barriers to applying to medical school, perceived by similar candidates in the future.(4) However, the conversion rate of such interviews into offers for a place at medical school remains proportionately low. Therefore, it is argued that the focus of widening participation initiatives should evolve to better support such candidates through the medical school interview process itself. Suggestions for improvement include providing candidates with better access to peer and mentor support, including better equipping teachers to support candidates through the application process.(5) Such candidates may also benefit from talking to current and previous medical students, and from medical school outreach events that might include interview techniques workshops and practice interview simulations.(6)

References:

Ref: 031, Board: F11
“Silver Trauma”; A multi-professional simulation course to address the changing face of trauma in the UK.

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King's College Hospital NHS Foundation Trust

Background:
Trauma has usually been thought of as a “disease” of the young caused by road traffic collisions or violent attacks. Traditional trauma-management training has been designed to reflect this, focusing on horizontal assessment and management of individual injuries(1).
However, the face of trauma is rapidly changing in the UK. A recent review of the Trauma Audit and Research Network Database has shown that the mean age of major trauma patients (Injury Severity Score >15) is increasing and that the proportion in the over 75 years age bracket has increased dramatically(2). Similarly, falls from a standing height have overtaken road traffic accidents as the most common mechanism of injury causing major trauma in the UK.
Frailty, co-morbidities, poly-pharmacy and altered anatomy and physiology are just some of the factors that can influence the management of older trauma patients. These patients may not be well served by a traditional Advanced Trauma Life Support approach to their assessment and management, and are at risk of under-triage and increased mortality(3). As a result further training of the workforce is required to meet the needs of this increasing patient group.

Methodology:
Funding for the Silver Trauma course was secured from Health Education England’s South London programme of strategic investment; “Improving patient safety through simulation and a quality assurance cascade system”. The course aims to improve the management and outcomes of older trauma patients. Areas covered include the risks of under-triage, the physiology and anatomy of ageing patients, the impact of poly-pharmacy and co-morbidities, the recognition of occult trauma and the anticipation and prevention of complications in older trauma patients.
This 1-day course is open to all members of the multi-disciplinary team, and no pre-requisite trauma training is required in order to participate. The course runs with a minimum of 14 participants supported by a faculty with mixed expertise (Trauma Specialists, Geriatricians, Paramedics, and Anaesthetists). Learning results from the use of short didactic lectures, high-fidelity simulation scenarios, debriefing and interactive workshops mapped to the course objectives.
Participants are asked to complete a short pre-course questionnaire about their preparedness to manage older trauma patients across different domains, rating themselves on a 5-point Likert scale. Post-course surveys are emailed to participants asking them to rate themselves in the same domains and to state how the course will change their clinical practice. Levels of course satisfaction are also evaluated.

Results:
1 course with 15 participants has been successfully completed in December 2016. All participants completed the pre-course questionnaire and 13 completed the post-course questionnaire (87%, n=15). Levels of satisfaction were extremely high with 100% (n=13) of participants being satisfied or extremely satisfied with course overall.
Across all domains assessed participants rated their preparedness to manage older trauma patients as increased following completion of the course. This change was particularly marked in terms of recognition of abnormal physiology and anatomy (20% prepared pre-course, 82% prepared or extremely prepared post course), recognition of occult trauma (13% prepared pre-course, 84% prepared post-course) and ability to triage (13% prepared pre-course, 67% prepared post-course). Qualitative data on intention to change practice suggests participants have a heightened understanding and awareness of special considerations when managing older trauma patients.

Discussion:
We have demonstrated that a multi-professional simulation course can increase the preparedness of the workforce to manage older trauma patients. Further work is required to evaluate whether the course has lasting educational impact or results in changed clinical practice in the workplace.

References:
Clinically Applied Live Anatomy Demonstration Complements Undergraduate Basic Science Teaching
E Lin Goh, S Enoch
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Background:
Tomorrow’s Doctors published (1993) by the GMC has had a profound impact on the development of medical curriculum in the United Kingdom (UK) and has resulted in a reduction in the amount of structured teaching allocated to basic medical science, particularly anatomy. Due to this change, it has been observed that graduates of the new curriculum have limited knowledge of essential anatomy [1]. Doctors Academy organised a day-long clinical anatomy course to assess the effectiveness of clinically applied live anatomy demonstration in complementing anatomy teaching and evaluate the need for additional anatomy teaching to supplement the current medical curriculum.

Methodology:
This course comprised of clinical anatomy sessions covering the thorax, abdomen, head, neck and limbs featuring live surface anatomy demonstrations and focus-group workshops. Tutors were required to be holders of the surgical membership exam from one of the Royal Colleges. Twenty-nine delegates attended the course. All delegates undertook a pre- and post-course assessment assessing the level of anatomy knowledge of the thorax, abdomen, head, neck and limbs.

Results:
Overall, there was a statistically significant increase of 6.8% in the scores of delegates between the pre- and post-course assessment (p=0.002). All but five delegates showed an improvement in their pre- and post-assessment scores. In the pre-course assessment, delegates performed best in their anatomy knowledge of the abdomen (86.5%), followed by the neck (77.3%), the head (68.8%), the thorax (36.7%), and the limbs (32.3%). Over 90% of the participants found the focus-group workshops to be useful in facilitating their learning of anatomy, 80% reported the course to have fulfilled their objectives, and all of them felt they had gained sound surgical anatomy knowledge and were more confident in their understanding of surface anatomy.

Discussion:
Changes to the medical curriculum have been implemented without adequate substantiation of the core anatomy knowledge required for effective surgical practice. The lack of consensus towards a common national core curriculum has led to a disparity in anatomy teaching between medical schools [2]. This, combined with changes in the basic surgical training, has resulted in a cohort of surgical trainees without the essential anatomy knowledge to be competent and safe surgeons [3]. In our study, the use of clinically applied live demonstration successfully enhanced knowledge of anatomy. However, we note that students were particularly deficient in their knowledge of the limbs and thorax, which is concerning. This supports the need for similar courses to enhance the learning of anatomy at an undergraduate and postgraduate level.

References:
Confidentiality and disclosure: driving the message home to final year medical students
R Parikh, K Adasonla, G Burton
Pennine Acute Trust/Manchester Medical School

Background:
In December 2014, a Glasgow dustbin lorry crashed into pedestrians at the roadside, killing six people and injuring fifteen others. The driver of the vehicle had passed out at the wheel. He had experienced similar episodes before, but had not declared these to the DVLA. None of the doctors he had previously seen had advised him to notify the DVLA (1). An audit in A&E in 2006 highlighted that doctors were not advising patients that they were unfit to drive (2). The GMC document “Good Medical Practice” describes two important, but potentially conflicting duties: “to respect a patient’s right to confidentiality”, and “to protect and promote the health of the patients and public” (3).

We explored, during our final examination OSCE revision day, learners’ knowledge of the circumstances/conditions where confidentiality may be broken. We then utilised a simulated patient OSCE station to work through a driving scenario. Epilepsy was chosen as it is a common clinical problem and examination question. Additionally, the DVLA guidance is very clear (4).

Methodology:
During the revision day, we explored (via open questions in a questionnaire) final year medical students’ pre-intervention knowledge about when confidentiality can be broken and the important information that must be communicated regarding this decision. Pre- and post-questionnaires using a five point Likert scale (0 – not confident, 5- very confident) explored confidence with: principles of confidentiality in practice; counselling patients on information disclosure; situations where confidentiality must be broken; and the role of the clinician in notifying the DVLA.

The teaching station demonstrated the ethical considerations when breaking confidentiality, and the DVLA guidance surrounding epilepsy and driving. Students were given a chance to role play different strategies and explore how to approach this “difficult” consultation. A “take-home message” was sought in the post-intervention questionnaires.

Results:
We received a total of 21 pre-course and 32 post-course questionnaires. Learners rated their confidence with the principles of confidentiality as good (3.8/5) pre-course. Confidence dipped with situations where confidentiality must be broken (3.4/5) and with counselling patients regarding information disclosure (3.1/5). Pre-course confidence of knowing when to break confidentiality was rated as 3.4/5. Specifically, learners rating of when to notify the DVLA was rated as 3.5/5. After the intervention, learners reported increased confidence in all domains. The pre-intervention questionnaire showed learners appreciated (across the sphere of medicine) when confidentiality may be broken. However, with driving the spread of conditions was limited: e.g. none mentioned syncope. Learners reported better driving subject knowledge after the intervention. The “take-home message” section not only attracted “knowledge-focused” responses but signalled a change of approach: sensitivity and empathy during the consultation were emphasised.

Discussion:
A lack of confidence in assessing a patient’s fitness to drive may mean patients don’t receive the necessary advice, and appropriate disclosure to the DVLA does not take place. Our study has also highlighted a knowledge/confidence shortfall of soon-to-be junior doctors. This could be a factor in the lack of advice provided in A&E (2). Of concern, is the fact that syncope did not appear in our pre-intervention questionnaire.

Improving confidence and knowledge, as well as equipping junior doctors with the skills to approach contentious areas (e.g. disclosure to the DVLA) has the potential to improve public safety and reduce road traffic incidents. We believe a teaching intervention for A&E staff is indicated.

References:
(2) Brooke BT, Southward RD. An audit of advice on fitness to drive during accident and emergency department attendance. Emerg Med J [Internet]. 2006 Feb; 23(2): 103-104.doi: 10.1136/emj.2004.020776
Early prescribers, from the side-lines to the hands-on
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Background:
Prescribing is a daunting task expected of new graduate doctors immediately upon arrival on the wards. The confidence in the transition from students to prescribing clinicians has been rated as low [1]. Drug errors are most commonly knowledge based and particularly relate to knowledge of pharmaceutics [2,3]. In the UK, prescribing teaching is mainly focussed at final year students [4] though students interact with drugs and clinical environments much earlier. Intervening early would prevent years of disorientation followed by a short period of shallow learning. The purpose of this is to determine the impact of early interventions on prescribing practices of junior medical students. We aim to evaluate both tutorials and a standardised clinical exposure.

Methodology:
A prescribing readiness programme consisted of two arms. Firstly 12 tutorials for third year medical students were delivered during their medicine and surgery attachment. This included case based discussions and timed practice written prescriptions. Secondly, the students had the opportunity to shadow a clinical hospital pharmacist. During the shadowing student were asked to complete a modified medication screening performa [5]. Students from the prescribing programme groups undertook an optional prescribing test. Final year medical students were offered the same test. The results from the two groups were compared. We designed an online questionnaire to assess confidence in prescribing and whether they felt that the prescribing programme had contributed to this. We also collected data on how we might improve these tutorials further. We used semantic differential scales and free text boxes.

Results:
At the time of writing this abstract data collection and analysis are incomplete and the results are therefore tentative. Descriptive statistical analyses are to be performed on the quantitative data and qualitative data will be analysed according to common themes.

Discussion:
We hope to show that introducing regular prescribing tutorials from an early stage is feasible and has a positive impact on students’ clinical learning. We believe by adding the ward based component with the pharmacist would bring prescribing issues to life and highlight their clinical relevance. We plan a follow-up study of the impact of these tutorials when students are senior.

References:
4. Wise J. Medical students are to be tested on prescribing. BMJ 2009 12/16;339.
Evaluating student perceptions and learning gain by using a game-based approach to aid learning
S Aynsley, R Crawford
Keele University

Background:
Gamification in higher education has been gaining traction as a plausible and useful addition to the diversity of learning resources available to both teachers and students. We have invented a team game to help aid pharmacology learning in medical students. The aim of our current study was to determine whether a range of students who played our game perceived any benefit to learning supported in this way. We found that students perceived a wide range of positive benefits and we consider how best to capitalise on these perceived benefits. By definition, games have rules that place the “play” in context, can be very thematic and are generally goal-orientated. They can also have layers of strategy depending on the complexity of the game design and are “safe”, meaning that mistakes and the impact of these can be explored in a controlled and contextual manner (Iosup and Epema, 2014).

Methodology:
We adopted an action research approach to explore the use and perception of a produced prototype game and set up a pilot test phase by running a series of voluntary drop-in sessions for Year 2 and Year 3 students to play-test the game in discussion with the chair of our school ethics committee. The game was play-tested with 28 - Year 3 and 16 - Year 2 medical students who were asked after playing to each fill out an anonymous evaluation questionnaire tool (Appendix 1) we had designed to explore their perceptions of the game. The instrument comprised of two parts:
The first part of the evaluation tool was a 5-point Likert scale with space for free-text comments, intended to collect perceptual data on player confidence before and after playing the game and to collect data on average play-time for each game played. We selected a Likert data collection method because it is a well-established ways to measure opinion by using a fixed choice format comprising, in this instance, in a 5-point scale where participants indicate the relative strength of opinion to pre-set statements (Bowling, 1997). The second part of the evaluation was based on exploring the learning gain aspects of the play, measured by a pre, post and then >3 days post small knowledge test, based on the game contents.

Results:
92% of third years and 100% of second years answered positively to our question instrument. The majority of the students across both years initially professed to lacking confidence, 65% (the remaining students were mostly neutral). This was consistent with our own perceptions of student understanding and the previous year’s student feedback on struggling with pharmacology. However after playing BrainceptTM there was a strong increase in confidence across both year groups with 82% of third years and 80% of second years indicating they felt more confident. We also showed a measurable and significant learning gain, based on pre and post-game pharmacology test performance.

Discussion:
From the responses and our data, we believe our approach and the BrainceptTM game has the potential to have a wide reaching benefit to student pharmacology learning by supporting learning of what is traditionally perceived as a rather difficult subject. Additionally this study highlights the possibility that BrainceptTM could be useful at different points in the students’ education and our future work will explore this notion. Future work on this project will test the game with other types of students who also have a need for pharmacology learning support (Pharmacists, medicinal chemists, nurses etc.) as a next phase of testing and to allow comparison with medical students experience with the game.

References:


Ref: 159, Board: G5
Tactical decision games as a method of improving confidence with the management of inpatient diabetes
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Clinical Teaching Fellow, NHS Lothian

Background:
Diabetes is an increasingly common condition with a prevalence of 10-20% amongst inpatients in the UK[1]. Despite this trend, evidence suggests that Foundation Doctors in the UK feel underprepared and lack confidence when dealing with the acute management of diabetes[2]. It has been proposed that this lack of confidence may impact negatively upon patient care[3]. Tactical decision games (TDGs) are a form of low-fidelity, classroom-based simulation which have been shown to be an acceptable way to teach non-technical skills to undergraduate students[4]. We propose that TDGs can also be effectively used to improve clinical knowledge and confidence. We developed a TDG session for undergraduate students at the University of Edinburgh with the aim of exploring the ability of TDGs to improve confidence with the management of inpatient diabetes.

Methodology:
Phase 1: Foundation Year 1 doctors in NHS Lothian who had attended the University of Edinburgh were surveyed using an online questionnaire. They were asked how confident they felt with managing certain aspects of inpatient diabetes and where they felt their deficiencies lay.
Phase 2: Results from phase 1 were analysed and used to create a targeted TDG session. This session was then delivered to 60 undergraduate students at the University of Edinburgh over a five month period. The sessions last for 90 minutes and are a form of table-top interactive simulation which cast the students as Foundation Year 1 doctors working in an acute hospital overnight. In two teams of 6-8, students are provided with 10 “tasks” related to the acute management of diabetes which they are asked to prioritise in order of urgency (30 minutes). Following this there is an open discussion, facilitated by the author, about why each team prioritised the tasks as they did and how each team would tackle the tasks (60 minutes). Self-reported pre- and post-session confidence was assessed in five domains related to the management of inpatient diabetes (hypoglycaemia, hyperglycaemia, diabetic ketoacidosis, hyperosmolar hyperglycaemic state and variable rate insulin infusion) using a four-point Likert scale (1 = not confident at all; 2 = not very confident; 3 = quite confident; 4 = very confident).

Results:
Phase 1: The initial survey was returned by 15 Foundation Year 1 doctors and highlighted several areas of uncertainty regarding the acute management of diabetes including diabetic ketoacidosis (DKA), hyperosmolar hyperglycaemic state (HHS), variable rate insulin infusions (VRII), and the management of hypo- and hyperglycaemia in inpatients.
Phase 2: 50 students (83.3% response rate) completed the pre- and post-session questionnaire. Self-reported confidence scores improved from a mean pre-session score of 2.30/4.00 to a mean post-session score of 3.29/4.00. 96% of students responded “yes” to the question: “following this session, do you feel more prepared to manage inpatients with diabetes?”

Discussion:
Tactical decision games (TDGs) appear to be an effective, inexpensive and easily reproducible way of improving confidence with the management of inpatient diabetes in undergraduate students. We believe this teaching method is transferable to many other areas of undergraduate and postgraduate education.

References:

Ref: 059, Board: G6
Teaching Instant Ageing to foster development of Empathy in fourth year Medical Students
J Mjojo, T Gill, T McGowan, A Blundell
Nottingham University Hospital

Background:
The number of people over 65 years worldwide is projected to rise from 605 million in 2000 to almost 2 billion by 2050, while those over 80 will quadruple to 395 million.¹ This means the core work for healthcare professionals will be dominated by caring for older adults with increasing frailty. Fourth year medical students from the University of Nottingham take a module in Health Care of Later Life (HCoLL). A number of students openly indicate this is not a speciality that interests them and some appear disengaged during the attachment. There is a concern therefore of a disconnect between their preconceived ideas and the reality of their future working practice. There is already evidence that frailty is under-recognised in UK Medical Curriculums² and therefore a focus on teaching attitudes towards older patients is essential. Studies have shown that empathy can be improved through experiential learning ³. We set out to improve student empathy by introducing an innovative simulation session entitled “Instant Ageing” which would enable students to reconsider their attitudes towards older patients.

Methodology:
The instant ageing simulation formed part of the induction day to the module and comprised of 3 tasks. The first task involved students putting on an “Instant Ageing suit (Gert)”⁴ which creates the experience of old age. The age-related impairments include: opacity of the eye lens, narrowing of the visual field, hearing loss, joint stiffness, loss of strength, reduced grip ability and reduced coordination skills⁵. In order to gain insight on the effect of wearing the suit, students wore pyjamas prior to and whilst wearing the suit whilst being timed, standing unaided and mobilising up the stairs. The student were asked to rate the activities as not easy, easy, difficult and very difficult. Deafness was simulated by wearing earplugs and responding to questions from a “doctor”. Both “patient” and “doctor” described the experience through free text. To simulate a painful peripheral neuropathy, popcorn kernels were put in the shoes of all students at the start of the session and students described the experience.

Students were asked to complete a questionnaire comprising of 5 questions. The first question was prior to the session; and encouraged students to document their honest views regarding elderly patients. Students were then asked later if their views had changed, with free text enabling students to describe their activities and how their views had changed.

Results:
50 students agreed to participate although the questionnaire completion rate was 60%. 66% of students indicated their views changed. Prior to the session, themes regarding views on older patients that emerged were: too difficult to treat, conservative, private and unspecific, unwilling to divulge information, vulnerable, very dependant, frustrated. All students participated in different tasks and the eight students that wore the instant ageing suit rated every task as being very difficult to achieve. Students found wearing the instant ageing suit led to difficulty putting on pyjamas, with the task taking far longer than without the suit and only being partially completed. Regarding the other tasks, communication and visual loss were seen by most students as challenging problems for both patients and doctors. Free text comments included “gained awareness why they tire easily” and “challenges faced in complying to medications”.

Discussion:
Simulating functional limitations and disabilities while performing activities of daily life allows students to appreciate and empathise with the difficulties that older patients can face. The wider impact of the session is not yet known, but students find the session useful and have commented that it prepares them for the attachment.

References:
1. 2013 World population prospects: the 2012 revision
The Current State of Teaching on Transgender Health in UK Medical Schools
M Hawker, A Swift
University of Cambridge

Background:
Estimates based on Population studies from multiple countries of the proportion of people who identify as transgender vary from between 0·5% and 1·3% for birth-assigned males, and between 0·4% and 1·2% for birth-assigned females (1). One quarter of transgender people have experienced being denied equal treatment in healthcare settings and transgender people who had to teach healthcare providers about their care were four times more likely to delay seeking healthcare (2). The General Medical Council provides advice for treating transgender patients on its website (3). Therefore, medical students need to be educated in line with GMC guidance to care for these patients as health practitioners' lack of knowledge may increase health inequalities experienced by transgender people.

This study aims to review the GMC Medical Schools Annual Returns for UK medical schools (4) and the relevant medical literature on the provision of teaching in UK medical schools.

Methodology:
The answers to the question “18. How does the curriculum address providing appropriate healthcare and understanding health inequalities, particularly relating to people from lower socioeconomic backgrounds, lesbian gay bisexual or transgender people, and people with learning disabilities?” in the 2014/15 and 2015/16 Medical School Annual Return Summary Reports for UK medical schools (MSAR) (4) were assessed. A literature search was carried out to identify relevant papers.

Results:
Out of the 38 UK medical schools, 36 filled in either or both of the 2014 and 2015 annual return surveys (94.7%). Of these, 30 report some teaching on LGBT health (83.3%). Only 9 medical schools (25.0%) specify that they provide teaching on gender identity or transgender health. Two of the medical schools sent some, but not all, of their students to gender identity clinics. Two courses gave lectures on the development of sexuality and gender. Four courses had discussion groups or small group teaching. Two courses incorporated transgender health issues into other areas of the course.

Only one study was found that specifically addressed the education of UK medical students regarding transgender health. Parameshwaran et al. (5) surveyed 166 medical students and found that 84.9% of participants reported a lack of LGBT-healthcare education. The majority of students were not confident in caring for transgender patients.

Discussion:
Based on the MSAR data and published literature, there is a clear need for improved teaching on the health needs of, and caring for, transgender people in UK medical schools.

This study was limited by the quality and lack of detail in the data submitted to MSAR and the lack of research in this area; the only study identified was limited to one institution in the UK. Further work is underway as part of this project to obtain more detailed data on teaching on transgender health in UK medical schools, alongside the development of specific teaching resources for clinical medical students at the University of Cambridge. We will undertake evaluation of this teaching to identify effective strategies for medical student education on transgender health. These findings will be shared with medical schools across the UK to encourage and facilitate good practice in this area.

References:

Ref: 133, Board: G8
The Where, What Lesion Game: The use of a game to reduce ‘Neurophobia’
H Mottershead
The Dudley Group NHS Foundation Trust

Background:
‘Neurophobia’, a term first used over 20 years ago, acknowledges the fear that medical students have of learning neurology; a phenomenon which continues to exist today. It has been suggested that combating this fear will aid in the teaching of neurology, but it remains unclear as to how to allay these fears successfully. The definitive proof that games improve medical knowledge remains allusive, but they could be useful when other educational interventions have had limited effectiveness, such as is the case in neurology.

Methodology:
A board game was produced where the players seek to match a presentation in time and space along the neuroaxis to the board. Points are awarded dependent on the accuracy of the diagnosis according to anatomical location, side and aetiology of the lesion. This board game was piloted following small group and bedside teaching sessions on neurology, to summarise the knowledge they had learnt during their first rotation. A questionnaire was completed on their experience of the game and their perceptions on the subject of neurology following its use.

Results:
19 third year medical students took part over 4 pilot games. Qualitative feedback on the game was positive, including the “interactive style” and “fun” elements. Feedback on perceptions of neurology following use of the game included feeling like “I have learnt more about neurology than I had in the past 2 and a half years at medical school” and that “the game definitely made me feel more confident in understanding where the lesion was and spotting neurological signs for certain conditions”.

Discussion:
The results suggest that the use of a game to teach neurology alongside traditional teaching methods was appreciated by third year medical students. It may also help to improve knowledge and counter ‘neurophobia’. To research this further, I intend to perform a multicentre cross-over study to investigate these observations further.

References:

Ref: 267, Board: G9
An exploration of current clinical supervision of foundation doctors in south east scotland: trainee and supervisor opinion
K Rankin, A Dewar, D Hope, H Cameron, A Jaap
University of Edinburgh

Background:
The concept of entrustable professional activities (EPAs) has been introduced in postgraduate medical training to provide a bridge between the theoretical aspects of competency-based education and actual clinical care(1). EPAs are described as “units of professional practice, defined as tasks or responsibilities to be entrusted to the unsupervised execution of a trainee once they have attained sufficient specific competence”(2). They assess the learner in terms of the amount of supervision required for a clinical task scaled as follows: not allowed to practice; full supervision; reactive supervision; allowed to practice unsupervised; allowed to supervise others(3). It has been suggested that EPAs could also be used in undergraduate education to aid transition to the workplace. We wanted to determine the perceived need for EPAs in this context by exploring current opinion on clinical supervision of Foundation doctors (FYs) and determining whether the type of information generated by EPAs would be considered useful.

Methodology:
An online survey was distributed to FYs working in core medical and surgical wards in South East Scotland and their clinical supervisors between December 2015 and April 2016. FYs were asked whether at the start of a new placement they: felt they had an appropriate level of supervision; were aware of the tasks for which they required supervision; and were able to ask for supervision if they felt it was required. Supervisors were asked whether they felt they were aware of which tasks they could delegate to an FY to perform unsupervised. Both groups were asked if they would value information about supervision requirements on an individual basis. Responses to questions were recorded using a 5-point Likert scale (strongly disagree to strongly agree). Simple descriptive statistics were used to summarise overall results.

Results:
222 of 464 subjects completed the survey giving response rates of 44% for FYs and 56% for supervisors. 50% of FY1s and 36% of FY2s agreed/strongly agreed that it was difficult to know what tasks they could undertake unsupervised at the start of a post. The majority agreed/strongly agreed that it was difficult to know how much supervision to expect for a specific task (FY1s 68%; FY2s 63%). Although over 85% of Foundation trainees felt confident to ask for supervision, 71% of FY1s and 53% of FY2s felt that they had sometimes had too little.
A high proportion of FY1s and FY2s would value individual information about the level of supervision they required at the start of a new block (85% and 80% respectively) and 60% of supervisors would also find this information useful. The majority of supervisors felt confident when delegating tasks to FY1s and FY2s (67% and 77% respectively), although a few felt that it was difficult to know exactly which tasks to delegate.

Discussion:
Our results suggest that often FYs do not know how much supervision they ought to have at the start of a new placement and that they would value this information. Although the majority of supervisors felt confident in being able to appraise a trainee’s ability, they also indicated that having individualised information regarding the amount of supervision required would be helpful. Although the survey was limited to South East Scotland, we think results are generalisable as this area encompasses a range of units from tertiary city centre to rural district general hospitals. We have demonstrated that the type of information potentially generated by EPAs is thought to be useful to both FYs and their supervisors and thus has the potential to improve clinical supervision and the transition into and through Foundation training. Further development of EPAs for this stage of training is therefore justified.

References:
Constructing an entrustable professional activities framework for undergraduate medical education: early lessons in construct validity and feasibility
K Rankin, H Cameron, A Jaap
University of Edinburgh

Background:
In recent years the concept of Entrustable Professional Activities (EPAs) has begun to be introduced to provide a bridge between the theoretical aspects of competency-based education and clinical care(1). EPAs are tasks or responsibilities to be entrusted to the execution of a trainee(2) the assessment of which is related to the amount of supervision they require(3).

However, there is a paucity of data regarding the utility of EPAs as an assessment tool. To date studies have been limited to assessing acceptability in postgraduate training. We have developed an initial suite of EPAs for final year medical students comprising clinical tasks which a new Foundation year 1 doctor (FY1) should be able to perform. The aim of this study was to gain a consensus on how supervisors feel our constructs encapsulate the job of being an FY1 and to determine how feasible it will be to make judgements regarding supervision requirements.

Methodology:
We conducted an online survey of clinical supervisors in South East Scotland (n=188) from late December 2016. The survey is due to close at the end of January 2017. We asked supervisors to consider the following clinical tasks: clerk a stable patient; deliver routine medical care; give/receive patient handover; complete immediate discharge summary; assess an unstable patient. Participants rated how important they felt each task was to the job of an FY1, how easy it would be to make a judgement about an FY1’s ability to perform the task on a 5-point Likert scale, and how well this collective set of tasks represented the totality of what they would expect a new FY1 to be able to do. In addition they were asked to rank the following sources of information as to how useful they would be in making judgements (work place based assessments, multi-source feedback, informal observations and review of patients seen and presented by the FY1) and also who they felt should be most involved in making these assessments (self, senior colleagues, doctors in training, non-medical team members).

Results:
To date we have achieved a 48% response rate (n=91). Full results will be presented, but preliminary analysis shows that more than 80% of supervisors feel that each task we have described is “very important” to the job of an FY1 and that the majority feel that the set of tasks described represents the totality of the job of being an FY1 well: the median response was 8 on a 10-point scale (1= not representative to 10= completely representative). More than 65% of supervisors feel it would be “easy” or “very easy” to assess an FY1’s ability to perform each of these tasks with the exception of “assess an unstable patient” – this was rated as “easy” or “very easy” by 41%. Review of patients presented by the FY1 was ranked as the most useful source of information for making judgements on performance, followed by informal global observations. Most supervisors felt that all team members should contribute to judgement decisions to some extent.

Discussion:
We appear to have an evolving consensus that our suite of EPAs is assessing tasks relevant to the job of a new FY1 and encapsulates the totality of this. Supervisors feel it will be easy for them to make meaningful judgements on performance of these tasks suggesting that it is a feasible style of assessment. Despite time pressures in the workplace, supervisors favoured direct observation by themselves or other team members as the best way to reach judgements on student performance. However, these responses were all given on a hypothetical basis. The next stage of our research will be to actually roll out our EPA tools to current final year students in order to gather further information on their utility in practice.

References:
Departmental induction for junior doctors: a useful tool or a ‘waste of time’?
S Quinn, M O’Sullivan
St. Michael’s Hospital, Bristol

Background:
Despite the uncertainties associated with working in a new department the word ‘induction’ is often met with a negative response from junior doctors. Challenges include understanding local protocols and systems as well as facing unfamiliar clinical scenarios. Induction processes within healthcare often focus on mandatory or legal training requirements and are delivered in a didactic fashion to large groups of doctors rather than focusing on these issues.
The 2016 National Training Survey reported low morale amongst junior doctors who feel undervalued(1). In several specialties including Obstetrics and Gynaecology (O&G) doctors reported heavy workloads.
We hypothesised that investing time in integrating new junior doctors into our department could accelerate their understanding of local processes, improve their feeling of self-worth within our team and enhance their ability to effectively manage heavy workloads. To begin to test this theory we improved our local induction for senior house officers (SHOs) starting in our department. In line with established teaching theory we selected relevant content and delivered it in an interactive and practical way(2).

Methodology:
The departmental induction for SHOs starting O&G at a city teaching hospital in August 2016 was re-designed to include two new parts. The first was a formal presentation on the day-to-day responsibilities of the job entitled ‘How to be an O&G SHO’. The second was a half day interactive clinical workshop on common clinical scenarios encountered by SHOs on the job. This session involved practicing history taking and examinations as well as using local protocols and policies to form management plans. These sessions were provided by specialty trainees who were ST3 or above. Feedback was collected immediately after the session and a follow-up survey was sent after 3 months of working in the department.

Results:
10 SHOs attended the induction (three foundation year two doctors, one trainee in general practice, three first year specialty trainees and three second year specialty trainees in O&G). 10 doctors completed the initial feedback (100%). Eight completed the follow-up survey (80%). One doctor was not working at the time of the follow-up survey and one did not respond.
The presentation ‘How to be an O&G SHO’ scored 8.5/10 for usefulness. Comments stated that the presentation was detailed and handouts were useful to have for future reference.
Prior to the clinical workshop the average confidence score before starting O&G was 4.5/10. This increased to 6.3/10 immediately after the workshop, a 40% increase. The follow-up survey at three months showed individuals rated the initial workshop 7.5/10 for improving confidence and 8.3/10 for familiarising with local protocols before starting the job.
100% of SHOs said they would recommend the induction workshop in the future. White space comments from six responders in the follow-up survey expressed the additional benefit of having the opportunity to meet other SHOs and registrars before starting the job.

Discussion:
A trainee led departmental induction including clinical workshops which utilise local protocols improved the confidence of SHOs starting a job in O&G. This method of teaching, in small groups, also facilitated early team integration.
It is important that local departments explore ways to help address the heavy workloads experienced by new junior doctors joining their teams and address the current low morale amongst this group. This method of induction could play a part in addressing these issues.

References:
Revamping the first clinical surgical attachment
J Bhogal, C E Allen, B De Souza, S Singh
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Background:
The GMC’s Tomorrow’s Doctors1 sets the standards for qualifying doctors, including surgery. The Royal College of Surgeons of England has produced the National Undergraduate Curriculum in Surgery (NUCS) to raise standards by demonstrating where surgery is essential and by defining the minimum requirements to improve understanding of surgery at medical school. Medical students have varied exposure to, and perceived value during surgical teaching. Studies show that personal contact with surgeons and practical experience are valued 2, 3. Feedback from students on previous surgical attachments at this campus Teaching hospital of Imperial College has highlighted certain aspects of surgical teaching delivery for improvement. With this in mind our aim was to change the surgical teaching programme for Year 3 students on their first clinical attachment to improve and facilitate student learning and engagement, as well as aligning it more to the curriculum published by the medical school. The changes introduced included targeted teaching to prepare students for exams and to encourage case based discussions.

Methodology:
This was a prospective mixed methods cohort study. The surgical curriculum was evaluated and mapped to the NUCS. We then implemented changes to the teaching programme based on this and the feedback received from previous groups. The mixed learning approach, incorporated a comprehensive weekly lecture programme, interactive case based discussions, the use of social media to engage students in discussion and OSCE-style teaching sessions. This was delivered to sequential cohorts of Year 3 surgical students from Imperial College School of Medicine. In order to assess whether the change to the teaching programme was valuable, a questionnaire survey evaluating the new interventions was carried out. Concurrent analysis of the questionnaire responses facilitated feedback to faculty and provided further intervention to the curriculum for subsequent cohorts of students. We then compared the feedback to our baseline of previous years using Likert scales as historical controls.

Results:
Results from the student survey and the curriculum framework used will be presented for two student cohorts. Within the first cohort, 100% of students found the re-vamped lecture programme and tutorials useful for their learning. The use of case based discussions and OSCE style practice sessions received very positive feedback with 90% strongly agreeing the sessions were useful for their learning.

Discussion:
Engaging both faculty and students in curriculum awareness and emphasising the importance of the subject is key to introducing change. By mapping the programme to the National Undergraduate Curriculum, we have been able to ensure the delivery of high quality teaching. Alongside this, by making the teaching programme more varied in terms of the teaching methods and increasing the amount of teaching the students receive we have sought to improve the experience of the students and increase their learning opportunities.

References:

Ref: 374, Board: G14
Supervision requirements for entrustable clinical tasks: a survey of foundation doctors and their supervisors
K Rankin, D Hope, H Cameron, A Jaap
University of Edinburgh

Background:
In recent years the concept of Entrustable Professional Activities (EPAs) has begun to be introduced to provide a potential bridge between the theoretical aspects of competency-based education and clinical care(1). EPAs have been described as tasks or responsibilities to be entrusted to the unsupervised execution of a trainee(2). The EPA framework set forth by ten Cate scales up supervision from observing only to being allowed to practice unsupervised and eventually to supervising others(3). As EPAs become an increasing part of postgraduate training, it has been suggested that similar tools could be used in undergraduate education, however this has yet to be tested. We carried out a survey to determine expected supervision levels for Foundation doctors (FYs) for key clinical tasks in both acute and stable settings to help inform the future development of EPAs for final year medical students.

Methodology:
An online survey was distributed to FYs working in core medical and surgical wards in South East Scotland and their clinical supervisors between December 2015 and April 2016. Participants were asked to indicate what level of supervision they would expect a new FY1 and FY2 to require for specific clinical tasks in both acute and stable settings. Supervision levels were described to participants as follows: observe only; direct; indirect; semi-independent; independent. Survey responses were compared between groups using t-tests and latent structure of the tasks was investigated by factor analysis. Free text comments were analysed thematically.

Results:
222 of 464 subjects completed the survey giving response rates of 44% for FYs and 56% for supervisors. Although both groups expected a slightly higher level of supervision in the acute versus stable setting for both new FY1 (p < 0.001). Factor analysis which suggested a unidimensional model (all variables loading at 0.4 or above). However, between group analysis indicated that FYs generally expected to perform tasks with less supervision than that indicated by their supervisors (p < 0.001). The need to clearly define context for the tasks was also apparent.

Discussion:
There was consensus on a semi-independent supervision level for clinical tasks for new FY1s suggesting that this would be an appropriate supervision target in designing EPAs for final year medical students. FYs expectations of working with less supervision than that offered by supervisors is in accordance with results of previous studies. However, although there were some statistically significant between-group differences, these did not translate into practical differences in expected supervision level in the expanded supervision scale we used. In particular, we would logically expect to see FY2s working with lower level of supervision than FY1s for the same task. The 5-point supervision scale we used may therefore be insufficiently granular to detect a meaningful difference in opinion. Some rewording and further expansion of our supervision scale is therefore necessary to ensure fitness of purpose for application to undergraduate EPA development.

References:

Ref: 300, Board: G15
What do students want from their undergraduate rheumatology placement? - Exploring student attitudes and perceptions

T Reynolds, J Morgan
North Bristol Academy, Southmead Hospital, North Bristol NHS Trust

Background:
Medical students currently receive only limited exposure to rheumatology during their undergraduate studies. It is therefore vital to consider the views of students in designing placements that are tailored to their needs and preferences. Furthermore, there are a variety of techniques that can be used in rheumatology teaching so it is important to establish which of these are felt to be the most important to students.

Methodology:
This is an educational evaluation and scoping project. Undergraduate medical students from Bristol University were surveyed at the end of their rheumatology placement to explore their attitudes and perceptions. A questionnaire was developed covering a variety of factors related to location and setting of the placement, along with exploration of the relative importance of different teaching techniques used in rheumatology, length of sessions, willingness to attend sessions out of hours and preferences about the number of sessions with different teachers. The importance was measured on a 10 point Likert scale from 1 (not important) to 10 (very important) and descriptive statistics were drawn from the combined responses. There were also free-text parts to allow students to elaborate on important areas.

Results:
54 students responded to the questionnaire which represents a 46% response rate although not all questions were answered by some students.
Receiving most of the teaching on hospital placement was more important (mean score of 8.1) than receiving teaching in university (4.6) or self-directed learning (4.2). Students felt that teaching in small groups was more important (8.8) than outpatient clinics (8.2), bedside teaching (7.8), simulation (6.7), private online study (6.1), online tutorials (5.4), large group (5.1), private textbook work (4.4) and listening to podcasts (3.3). Regular sessions with the same teacher were felt to be more important (7.4) than having multiple teachers (6.0). Students felt that it was more important to be in a large tertiary centre (6.1) rather than a smaller district general hospital (4.5). They also felt that it was more important to remain on one clinical site (7.4) throughout their placement rather than visiting multiple sites (3.2). Students scored the distance from accommodation as being more important (8.6) than the distance from partner and family (5.9), however this was clearly highly important to some respondents with 12 students (23.5%) rating this factor as 10/10 importance on the Likert scale. Most students were only willing to travel up to 10 miles (30, 64.7%) or 10-20 miles (8, 15.7%) although some were willing to travel longer distances if accommodation was provided. Students wanted individual sessions to be 30-60 minutes (33, 64.7%) or 1-2 hours (17, 33.3%) in duration. Willingness to attend sessions out of hours varied amongst the group with probably not (16, 31.4%), probably (15, 29.4%) or unsure (9, 17.6%) being the most frequent responses.

Discussion:
As a result of this study we will look to match placements to more closely meet Maslow’s basic physiological needs relating to our students, for example with regard to location and session duration. It seems to be important to receive the majority of teaching in the hospital setting so we will limit the proportion of teaching delivered centrally at the university. We know that medical students are a diverse group, have multiple learning styles and prefer information to be provided in a variety of ways so teaching methods utilised need to be designed to allow this. We will promote the use of the preferred teaching methods identified in this study and avoid or look for ways to improve methods that are felt to be less useful.
This study has highlighted student preferences regarding their undergraduate rheumatology teaching and provides important information to allow us to design the best quality placements to enhance the learning of our medical students.

References:
Examiner training; can it enhance students' confidence?
Helen Nolan
UCL

Background:
OSCEs are considered to be the benchmark for assessing clinical competence (1). Nonetheless, students still report that they haven't had a “fair” examination experience citing examiner bias or inter-rater variability (2, 3). Training for OSCE examiners is recommended by the GMC. Training is a requirement for UCL OSCE examiners.

Methodology:
Video training-modules with simulated OSCE stations featuring candidates at varying standards are used for training. Final year medical students were given the opportunity to update OSCE station training videos for junior year groups’ OSCEs.
They filmed communication and examination stations. Twenty-six final year students were allowed to mark the recorded candidates’ performance using corresponding marksheets.
Their experiences of contributing to and completing these modules and whether it influenced their attitudes towards OSCEs will be evaluated. Data will be collected using questionnaires (Likert scales, free text comments) and students will be invited to participate in a focus group.

Results:
Verbal feedback and debriefing suggested that students were largely unaware of this training or that it was required. They appreciated the attention paid towards ensuring examiners had a suitable understanding of what was required and the standards expected of students.

Discussion:
Areas to be considered further include:
• understanding of rationale for examiner training
• students’ rating of quality and reliability of this training – do they value it as a means to reduce examiner variability?
• does it enhance transparency and students’ understanding of OSCEs?
• does it influence levels of “trust” in OSCEs?
This may enhance the quality of information provided to students regarding assessments and allow us to further improve satisfaction levels with assessments.
(Ethics approval for this study has been sought from UCL research ethics committee.)

References:

Ref: 272, Board: H1
Identifying Struggling Medical Students Early: Can An End Of Block Assessment Predict Future High Stakes Exam Performance?
A Baldwin, D Kinnair and J Dormer (Leicester Medical School)
University Hospitals of Leicester

Background:
Background
Evidence from UK medical schools suggests that early performance in written and OSCE examinations can predict poor performance in later years (1,2). Medical students can be weak at recognising when they are failing, take little personal responsibility for performance and be reluctant to seek help, therefore methods of highlighting problems early from available assessment data are required.

At Leicester Medical School, students start the junior clinical rotation in year three of their five-year course. This consists of a series of seven week attachments, including the mental health block, and ends in the spring of year four with the high stakes Intermediate Professional Exam (IPE). Students then start senior rotation prior to taking the Final Professional Exam (FPE) in fifth year.

The Mental health end of block exam consists of a 40 Question Single Best Answer written paper and a one station OSCE, similar to the format of IPE and FPE in a smaller scale.

Aims
To evaluate the end of block assessment to assess whether it is valid and viable as a predictive tool for future performance.

Methodology:
This is a retrospective observational study. Exam results from the student cohort completing psychiatry clinical blocks in 2014-2015 (n=221) are being analysed using binary logistic regression analysis to examine whether end of block assessment performance correlates with the main outcomes of high stakes assessments of IPE and FPE. Models will be adjusted for potential confounding factors of gender, maturity, intercalation, graduate status and funding in concordance with other work (1).

Results:
The data is currently being analysed and full results will be presented at the conference.

Discussion:
This will be pending results. Medical students at risk of failing is a significant problem for the individuals personally, medical schools and society (2). They are at risk becoming poor doctors, committing professional misconduct (3) and undergoing disciplinary action (4). Given these issues, we hope that this end of block assessment will be a tool to promote earlier recognition of struggling students to facilitate remediation. Limitations of this work include the number of students as at present one full cohort of students have progressed through to the end points.

References:
4. Jennifer Cleland, Rachelle Arnold & Alistair Chesser (2005) Failing finals is often a surprise for the student but not the teacher: identifying difficulties and supporting students with academic difficulties, Medical Teacher, 27:6, 504-508, DOI:10.1080/01421590500156269
Incorporating patient partner scores into high stakes assessment: opinions and attitudes
F Thomson, R MacKenzie, M Anderson, A Denison, G Currie
University of Aberdeen

Background:
Volunteer patients (also known as Patient partners (PPs)) play an increasingly vital role in undergraduate medical curricula. They frequently take part in the objective structured clinical examination (OSCE) and rate aspects of the students’ performance. However, the inclusion and weighting of PP marks varies and attitudes and opinions relating to how they should contribute towards the pass/fail outcome are uncertain.

Methodology:
A prospective observational study was conducted to explore the beliefs of PPs surrounding inclusion of their scores in a high stakes undergraduate OSCE in a single UK medical school. Questionnaires were designed to establish baseline demographics and consisted of open, closed and free text questions. Purposive sampling for diversity was employed as all PPs with experience of helping deliver different components of the local MBChB curriculum were asked to participate. Quantitative and qualitative data were analysed using descriptive statistics and framework analysis respectively.

Results:
Fifty out of 160 (31% response rate) PPs of whom 88% had spent > 1 year within the local programme, completed the questionnaire; half (52%) had been involved for > 5 years and 70% had participated in a final year OSCE. Sixty per cent felt their marks should be incorporated into a student’s overall score in a high stakes assessment, while 28% were uncertain. The main reasons for inclusion included recognition of the patient perspective (31%) and their ability to assess attitudes and professionalism (27%), while reasons against inclusion included lack of qualification/training (18%) and concerns relating to consistency (14%). The majority of PPs were uncertain what proportion of the total mark they should contribute, although many felt that 5-10% of the total score was reasonable. Most respondents (70%) agreed that students achieving a poor PP score across an entire exam should not automatically fail, although 64% were comfortable in scoring a student poorly even if it was thought they might fail overall. Most PPs (62%) acknowledged that prior to mark inclusion, further training was required.

Discussion:
This data has shown that most PPs consider it reasonable for them to “formalise their expertise” by contributing marks in the overall assessment of students in a high stakes OSCE, although what proportion they believe this should represent was variable. Before a policy of PP mark inclusion is enacted across assessments, it would seem reasonable to compare outcomes (i.e. pass/fail status) using historical data both incorporating and not incorporating PP marks to evaluate the effects of doing so. Further attention to existing PP training programmes is also required in order to provide clear instruction on how to globally rate students to ensure validity and consistency of the OSCE.

References:

Ref: 302, Board: H3
Mapping the assessment of clinical reasoning in UK undergraduate medical curricula
D McLaughlin, A Silva, J Matthan, G Page
Durham University

Background:
Clinical reasoning (CR) is a key skill of the proficient clinician and is the process by which clinicians collect cues from patient presentations, process information, come to an understanding of a patient’s problem or situation, plan and implement interventions, evaluate outcomes, and reflect on and learn from the process. Despite the importance of CR in patient care, the literature suggests that the skill is rarely formally taught and assessed in medical schools, and qualified doctors often remain unsure how they perform the skill (1)
The General Medical Council’s (GMC’s) publication Outcomes for Graduates (2) specifies three outcomes that are aligned to the definition of CR as given above:
8c - Justify the selection of appropriate investigations for common clinical cases;
8g - Make accurate observations of clinical phenomena and appropriate critical analysis of clinical data; and
14f - Make clinical judgements and decisions, based on the available evidence, in conjunction with colleagues and as appropriate for the graduate’s level of training and experience. This may include situations of uncertainty
In order for students to achieve these outcomes, they need to be operating at a relatively high level (at least ‘Evaluate’) within the revised Bloom taxonomy of learning (3). This study aimed to map how these outcomes are assessed, in a representative sample of UK undergraduate medical curricula.

Methodology:
The study design included both quantitative and qualitative aspects, featuring the use of an online questionnaire that yielded quantitative data as well as free text comments, with follow-up interviews. Data were analysed using a mixture of methods, including thematic analysis. Ethical approval for the study was granted by the Ethics Subcommittee of the School of Medicine, Pharmacy & Health at Durham University in June 2015. The study was performed by sending a link to the questionnaire to the person identified as the ‘Director of Teaching’ at all 33 UK undergraduate medical schools. He/she was asked to complete the questionnaire or to forward the request to a colleague. The questionnaire remained open for a period of 8 weeks from 10th June to 4th August 2015. Follow-up interviews were completed in the first three months of 2016.

Results:
42% (14/33) of UK undergraduate medical schools responded to the questionnaire. Analysis of responses indicated that the sample was broadly representative of UK undergraduate medical curricula in terms of geography and the range of programmes being offered by UK medical schools. All respondent schools indicated that they assessed their students’ attainment of GMC outcomes 8c, 8g and 14f. Respondent schools use a wide range of methods to assess these outcomes, but the most commonly-used assessment types are multiple choice written exams (MCQs) and Objective Structured Clinical Examinations (OSCEs). Outcomes 8c and 8g are more commonly assessed by MCQs, whereas outcome 14f is more commonly assessed by OSCEs. Some respondent schools indicated that the outcomes are also assessed by ‘Open question/short answer written exams’ and ‘Long case’ assessments. One of the 14 respondent schools indicated that their students undertake formal ‘CR assessments’.

Discussion:
This study indicates that UK undergraduate medical schools are formally assessing their students’ attainment of the CR-related outcomes for graduates specified by the GMC. Relatively few medical schools operate formal ‘CR assessments’ and there currently seems to be no consensus on how best to assess students’ CR skills. A wide range of assessment methods is used, with some variation that may be linked to progression up the revised Bloom taxonomy of learning (3).

References:
The “S” in OSCE: How we standardise our OSCE examiners
D McKechnie, W Kenworthy, D McKechnie, N Gostelow
University College London Medical School

Background:
To promote standardization in their marking, Objective Standardised Clinical Examination (OSCE) examiners at University College London Medical School (UCLMS) undertake an online training module, which involves grading two filmed OSCE stations. Feedback for the online training has been positive but examiners request more practice marking ‘borderline’ candidates and communication skills, as they find these harder to judge.
The purpose of this project was to develop three videos depicting ‘borderline’ candidates in a greater range of OSCE scenarios, to assist examiners in marking these candidates in a consistent and standardised manner.

Methodology:
With input from the UCLMS faculty, three final year medical students produced and filmed three videos, simulating borderline candidates undertaking two communication skills stations and one clinical skills station. Previous mark schemes guided the definition of the ‘borderline’ candidate.
Preliminary testing involved 26 final year students and 7 clinical teaching staff marking a video, blinded to the intended overall mark.

Results:
82% of the ‘examiners’ graded the video as ‘borderline’ with a mean score of 13.4 and a standard deviation of 2.1 (range 9-17.5).
There was good concordance between student and faculty scores of the video.

Discussion:
In this study, we confirmed that the tested video represented a ‘borderline’ performance in a trial group. High examiner score variability suggests poor standardization and difficulty marking borderline candidates.
Students and faculty both felt that the performances depicted were fair examples of a 'borderline' candidate. We aim to demonstrate the effectiveness of these videos by looking for reduced variability in examiner marking following completion of the online module in 2017.
Videoing OSCEs – an aid to defensibility or an unnecessary expense?
R Hogley, P Fisher
University of Manchester

Background:
Every year medical students on the MBChB programme in Manchester request that OSCEs be videoed in order to facilitate appeals. We therefore decided to explore the pros and cons of recording clinical exams in this mixed methods study.

Methodology:
We firstly reviewed the literature to determine whether assessment of video recording of OSCEs has been found to be reliable. We then surveyed the assessment leads of all 34 medical schools, the GMC and 16 Royal Colleges and Faculties to explore UK experience of videoing high stakes OSCEs. This included an invitation to interview for those who currently video or who had given serious thought to doing so. All willing respondents were interviewed in a semi-structured format. Qualitative data from questionnaires and interviews were coded manually and subsequently themed.

Results:
Only two papers were found in the medical education literature directly comparing live marking with marking of videoed OSCEs1,2. In both of these studies the marks awarded for videoed scenarios were lower than those given when the same student was examined live.
31 questionnaires were returned; 21 medical schools and 10 postgraduate institutions, giving a response rate of 64.6%. 8 interviews were conducted.
Only one medical school is currently videoing OSCEs and using these videos for appeals. One medical school that videoed in the past ceased to do so due largely to the technical problems this presented. Other institutions use OSCE videos for examiner training and quality assurance purposes. The majority of institutions (52%) were neither currently videoing nor considering videoing OSCEs.
Themes arising from free text comments and interviews were use of videos to defend awarded grades in case of appeals; concerns around feasibility of videoing; using videos to improve overall reliability of assessments more generally (through use in examiner training or by allowing one examiner to assess all candidates on one station); and use of videoing for formative feedback and teaching.

Discussion:
Whilst videoing of OSCEs may seem to students to be an easy technical fix to the perceived problem of hawk examiners, most assessment leads feel that the reality may not be so simple. The literature suggests that reliability of the overall mark in an OSCE is more efficiently increased through using a greater number of exam stations rather than using two live markers (3). Furthermore there is uncertainty as to whether video marking is equivalent to live marking (1,2), an uncertainty which might be even greater if the video examiner were to be aware of a pending appeal. The costs of videoing might be significant, including not only the costs of the technology but also of staff time should appeal rates rise.
Following this study we do not feel that there is sufficient evidence to justify the expense of videoing high stakes OSCE for use in student appeals at the present time.

References:

Ref: 053, Board: H6
“Breakfast Club” scheme – not just in it for the breakfast: a sustainable model for creating formal teaching opportunities for junior doctors.

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Undergraduate Medical Education Department, Nottingham University Hospitals, NHS Trust, Nottingham, UK.

Background:
The Breakfast Club scheme1 is an educational initiative that offers supplemental early morning (08.00-08.45am) teaching to undergraduate medical students. Administrative support, such as room booking and free breakfast is provided by the undergraduate medical education department. Teaching is delivered by junior doctors, who receive written feedback from an experienced educator observing the session. Research into near-peer or cross-level teaching is traditionally focussed on the learner’s rather than the tutor’s perspective2. This study aims to evaluate the tutors’ experience, perceptions and the motivations behind participating in this scheme.

Methodology:
A purpose designed Likert scale questionnaire was prospectively emailed to volunteer tutors, who delivered breakfast club teaching at Nottingham University Hospitals, Queens Medical Centre Campus, from December 2015-November 2016. The survey included free text qualitative response questions on the study aims.

Results:
The survey was completed by 27 tutors consisting mostly of Foundation Year 1 doctors (56%), Foundation Year 2 doctors (26%), core medical trainees (7%) and teaching fellows (7%). 37% of tutors delivered two or more teaching sessions. Most tutors designed teaching contents based on their clinical experience (67%) rather than the undergraduate (52%) or Foundation (18%) curriculum; therefore, they requested more guidance in selecting learning objectives. Participation in the scheme helped tutors’ development as educators (89% moderately/strongly agreed), and 74% had implemented the feedback they received in subsequent teaching sessions. Thematic analysis of the qualitative data identified four main benefits/motivations to tutors: i) improving teaching experience, ii) career and personal development, iii) sharing clinical experience, and iv) autonomy regarding teaching technique.

Discussion:
The results indicate that the Breakfast Club scheme provides a model that empowers junior doctors to be involved in teaching. The timing is convenient as it does not interfere with the commitments of either tutors or learners. Tutors value the opportunity for teaching observation and formal feedback. Administrative support ensures that tutors are focussed on teaching delivery rather than logistics and organisational aspects.

The General Medical Council requires doctors to contribute to the teaching and training of other doctors and students3. This educational initiative offers a sustainable, reliable and reproducible format for junior doctors to gain experience and develop as educators. Research and evaluation of new educational programmes should be balanced to include the experiences of tutors tasked with teaching delivery. In response to the survey results, further tutor-specific support has been provided by creating standardised learning objectives mapped to the undergraduate curriculum.

References:

Ref: 134, Board: H7
“Nifty Fifty: Ways to Avoid Being a Trip Hazard on the Wards”. Introduction of an easy to use guide of 50 activities to final year Medical Students to facilitate learning during independent ward time

R Noble, C Peal
Queen’s Medical Centre, Nottingham University Hospitals

Background:
Final year medical students have multiple commitments: classroom and bedside teaching, clinics, self-directed ward work and exam preparation. Perception amongst senior medical staff is that students do not spend enough time on the wards, therefore missing out on experiential learning opportunities(1). Final year students at the University of Nottingham participate in 8 week Medicine rotations in groups of 15 at the Queen’s Medical Centre Campus. Our aims are to establish students’ perceived barriers to more spending time on the wards; support self-directed ward time with a simple guide of fifty activities students, entitled ‘Nifty Fifty: Ways to Avoid Being a Trip Hazard on the Wards’; and finally see if we can maximise these learning opportunities by enhancing the involvement of junior doctors on the wards.

Methodology:
Initial surveys of final year medical students gathered data on the frequency of ward attendances and barriers to more frequent attendance. It was also ascertained how confident the students felt, what activities they partake in and how useful they find the junior doctors on the wards. Two interventions were planned. The first intervention provided the students with the ‘Nifty Fifty’ handbook mid-way through their Medicine attachment to see if ward attendances subsequently improved, or if the spectrum of activities undertaken broadened. The second intervention targeted the ward doctors and promoted a beneficial learning environment for the students by challenging their perceived barriers. A ‘Medical Student Care Bundle’ was developed which was presented at F1 and F2 teaching prior to being displayed on all Medical and Surgical wards in the hospital. The students will be resurveyed following this intervention to see if a greater difference has been made.

Results:
Surveys undertaken prior to intervention identified that more than half of the students visit the wards once a week or less. Barriers to this included uncertainty of what to do, too much scheduled teaching and the feeling of ‘being in the way’. Following the introduction of the ‘Nifty Fifty’ handbook, 60% of the students reported attending the wards at least twice a week. It remained that they felt they had too much scheduled teaching to attend more frequently, but they reported feeling more confident on the wards and uncertainty about what to do was reported less frequently. The spectrum of activities that the students took part in also broadened. Junior doctors were reported to be useful, however negative experiences often stemmed from students being ignored or dismissed. The results following the second intervention and involvement of the junior doctors are pending.

Discussion:
Scheduled teaching was a clear perceived factor inhibiting students from more self-directed ward time. An objective-orientated taught curriculum in the form of scheduled teaching activities is important to meet the educational needs of medical students, but incomplete clinical experience may leave students at risk of being unprepared for a clinical role without the clinical application of theoretical knowledge. Following initial surveys, the guidebook was introduced as a tool to improve confidence and clinical experiences on the wards by suggesting brief activities that could be undertaken, even during short breaks in their timetable and also activities that would not necessarily require the support or guidance of junior doctors. Indirect guidance of independent ward time has proved useful in supporting medical students’ experiential learning(1) and hopefully this will be further improved still with involvement of ward staff and junior doctors.

References:

Ref: 111, Board: H8
“What the flip?” Exploring perceptions of the flipped classroom among staff and students
E Cottrell, I Munjal, J Fisher, J Stewart
Northumbria Healthcare NHS Foundation Trust

Background:
The flipped classroom is an educational technique which reverses the traditional elements of a classroom: students are given preparatory material as ‘homework’ to complete prior to a face to face session so that class time is liberated for interactive activities (1). The technique aims to promote active learning and development of higher order cognitive skills, such as knowledge application, evaluation and critical analysis (2).

There is an expanding evidence base for use of the flipped classroom in undergraduate medical education (3-6), postgraduate medical education (7-8), and education of allied healthcare professionals (9-10). These studies predominantly consider learner performance and satisfaction; less consideration has been given to learners’ preconceptions of the flipped classroom, that may become barriers to its use. Critically, there is a paucity of studies which consider the views of teachers and administrators – those who design, develop and action its introduction. Understanding the wider faculty perspective on the flipped classroom is important, as their views and preconceptions on an educational tool strongly influence the likelihood of it being successfully implemented.

This study is an enquiry into the use of the flipped classroom as an educational tool in undergraduate medical students, aimed at understanding the perceptions regarding it, and the barriers to its use from a holistic, departmental perspective; students, teachers and administrators.

Methodology:
Opinions from student, teacher and administrator groups will be sought using a questionnaire. The questionnaire structure is mapped to the key components of a flipped classroom: for teachers - the creation of pre-session material, classroom activities and student engagement; for administrators - the organisation of pre-session material and classroom time; for students - the quality and ease of access of pre-session material, efficacy and interactivity of classroom activities, and the degree to which the pre-session material prepared them for the classroom session.

At the start of the project, teachers and administrators will complete a questionnaire to elicit preconceptions regarding the flipped classroom, and perceived barriers to its use. Following this, a series of flipped classrooms will be integrated into the existing curriculum of third and final year medical students based at Northumbria Healthcare NHS Foundation Trust (NHCT). After delivery of the flipped classroom series, the teachers and administrators’ opinions will be sought again via a questionnaire.

The students taking part in the study are undergraduate medical students on the MBBS programme at Newcastle University and based at NHCT for their third or final year of studies. Student opinion will be sought only once and on a voluntary basis to minimise their burden. This will be done at an end of project feedback session where students will be asked to complete a short questionnaire used to stimulate reflection on their experiences before a focus group discussion. Data gathering is aimed at gaining a global impression of flipped classroom as a technique, rather than a critique of individual sessions.

Data will be analysed based on principles of content analysis.

Results:
Results from the questionnaires and feedback session will be presented focusing on the similarities and differences in perspectives across each of the three groups and the identification of barriers to implementing flipped classrooms.

Discussion:
Results from this project will be used to develop a coordinated approach for managing the design and delivery of flipped classrooms within NHCT. Understanding perceptions and barriers to using the flipped classroom will help inform strategies to overcome these, thus enabling more judicious, efficacious use of this teaching method within our local curriculum as well as informing the wider debate on managing curriculum development.

References:


Ref: 109, Board: H9
Agents for Change: Can a novel education programme improve undergraduate engagement in NHS Management and Leadership?
R Najim, R Rabee, J Henry, M Najim, N Dutta, D Cox, S Singh.
Imperial College, London

Background:
The NHS is facing increasing challenges and the need for doctors who can lead change has never been greater (1). Research shows that good NHS management affects patient care positively, while poor leadership can be catastrophic (1, 2, 3, 4). Importantly, patient outcomes and overall performance improves when doctors engage in leadership (5). However to do so effectively, medical professionals require leadership skills – and at all levels. The Medical Leadership Competency Framework (MLCF) has laid out a structure for the development of these skills. Despite this, there is no consensus between universities on the delivery of these competencies, and we are still only seeing little engagement at undergraduate level. Our aims, therefore, were to deliver and evaluate the impact of a 3-tier undergraduate workshop programme addressing important issues on NHS management and leadership. The aim is to assess students’ knowledge and attitude towards NHS management and leadership. This novel teaching programme entitled 'Agents for Change,' was complemented by the implementation of a supervised Quality Improvement Project (QIP).

Methodology:
42 medical students in their third year were enrolled onto 3 workshops delivered to cover a range of topics based on the MLCF. Knowledge improvement was assessed by a fifteen question single best answer test and attitudes assessed by a 25 question, five- point Likert scale. Both were conducted pre-and post-intervention. This was supplemented with qualitative data from focus groups that were also completed pre and post-intervention.

Results:
37 (88%) students completed all three skills sessions. Focus groups demonstrated a general opinion towards a desire for further training in both skills and theory; a lack of clarity on how to act upon and deliver change was eminant. Average score on the knowledge test rose from 5.67 to 7.75 post-intervention, with an average increase of 2.08 (SD 2.58, p

Discussion:
Providing supplementary skills and knowledge based tuition to Quality Improvement Projects (or similar MLCF educational efforts) is effective, replicable by non-experts and acceptable to medical students. 'Agents for Change,' our novel teaching programme, improved our students’ attitude and knowledge base. This is an important yet neglected part of undergraduate medicine. Implementing similar teaching programmes may prove to enhance engagement in NHS leadership in the future.

References:
3. Rowling E, The King’s fund. Leadership and engagement for improvement in the NHS: together we can: the King’s Fund leadership review, 2012.
Broadening Horizons: Exploring the Value of Expedition Style SSCs in the Undergraduate Medical Curriculum
O Gokhale, N Yau, N Stafford, J Barr, K Jones
Swindon Academy (University of Bristol), Great Western Hospital, Marlborough Road, Swindon, SN3 6BB

Background:
Student Selected Components (SSCs) are well established and integral to the UK undergraduate medical curriculum. They provide students with an element of choice whilst delivering defined core learning outcomes [1]. SSCs encourage independent learning, technical and human factor skills development and promote Good Medical Practice [2]. Students also gain an opportunity to explore potential career pathways [3]. Swindon Academy (University of Bristol) has offered a unique SSC in Wilderness and Expedition and Medicine (WEM) for the last four years. Following its success, SSCs in Diving Medicine (DM) and Sports and Exercise Medicine (SEM) were also provided in 2016. As far as we are aware, these are the first structured programmes of their kind to be offered to medical students in the UK. Each SSC ran for four weeks and consisted of simulation sessions, tailored tutorials, visits to specialist facilities, clinical placements, and the completion of a 3000 word project in a special area of interest. Students on the WEM SSC also undertook a 6 day field trip to the French Alps with Faraway Medicine to experience expedition medicine first hand. Through these unique expedition style SSCs, we aim to deliver core components of the curriculum, whilst promoting career progression and inspiring a future cohort of junior doctors.

Methodology:
79 students took part in expedition style SSCs at Swindon Academy in 2016, with 60 in WEM, 11 in DM and 8 in SEM. Data was collected using pre and post course questionnaires in WEM. Students were asked to rate their confidence in ‘leadership’, ‘teamwork’, ‘situational awareness’ and ‘problem solving’ using a ten point semantic differential scale. Post course questionnaires were completed by SEM students which also used a ten point semantic differential scale. Quantitative data was analysed using descriptive statistics. Qualitative data was collected using free-text boxes from WEM and SEM students and from personal reflective scripts which followed a writing framework in DM. This was analysed using conventional thematic analysis.

Results:
WEM students reported an increase in post course confidence in the domains ‘leadership’, ‘teamwork’, ‘situational awareness’ and ‘problem solving’ as 24%, 22%, 30%, and 26%, respectively. Students in SEM rated the course as beneficial for their future careers and promoting interest in SEM as 83% and 81% respectively. Students in DM gained an appreciation of the role of the diving expedition medic and developed an interest in the career opportunities available within this field. The majority of students felt the experiences learnt in the remote setting were transferrable to the hospital setting. Many students report they will pursue future careers in expedition related specialties subsequent to these unique experiences.

Discussion:
Expedition style SSCs proved beneficial to students at this level of training. Students acquired multiple transferrable skills, and gained motivation from experiencing medicine aside from the standard hospital environment, and describe an increased willingness to become involved during their subsequent clinical placements. Students felt this type of SSC increased their confidence in multiple domains described in Good Medical Practice, especially ‘situational awareness’. Students also felt inspired by this method of training; some even stated it was ‘the best week of medical school’ and that ‘all students should do this’. They also gained unique and first-hand insight into potential new career paths and feel inspired to explore these further. Expedition style SSCs as part of the undergraduate medical curriculum may prove vital in promoting career diversity within medical training, and sustaining enthusiasm and continued interest amongst medical students. Given their evident value, these SSCs are now established at Swindon Academy and will form part of the SSC curriculum in 2017.

References:
Challenges within maternal healthcare – teaching undergraduates about perinatal mental health using simulation
J Taylor, J Moffatt, C Sullivan
Swindon Academy

Background:
Mental health problems remain one of the leading causes of maternal death in the UK. A quarter of women who die during the year post-partum die from mental-health related causes(1). Mothers and Babies: Reducing Risk through Audits and Confidential Enquiries across the UK (MBRRACE-UK) reported that 101 women died by suicide from 2009-2013. Often these women have multiple co-morbidities such as concurrent substance misuse (14%), and domestic abuse (17%) as additional risk factors(1). It is acknowledged that there is a high risk of severe mental disorder in the early post-partum which can be difficult to diagnose. Identifying women at risk, particularly those with a mental-health history, is vital to planning care throughout pregnancy(2). Failings in care often link to under-recognition of symptoms, poor communication between services and lack of specialist psychiatric facilities(1). Raising awareness of this serious issue will aid identification and appropriate referral to perinatal mental health services.

Currently, the Royal College of Obstetricians and Gynaecologists (RCOG) undergraduate curriculum requires students to demonstrate an understanding of common postnatal psychiatric illness and its management(2). This can be a difficult area to gain clinical experience in, due to the sensitive nature of the cases, and the willingness of mothers and healthcare professionals to involve students in this area.

Methodology:
We have designed a simulation session covering puerperal psychosis and depression with suicidal ideation during pregnancy, with support from specialist mental-health midwifery staff. Undergraduate students will participate in this session during their clinical Obstetrics and Gynaecology attachment. Participants will complete an anonymous questionnaire, rating their knowledge and confidence in managing maternal mental-health issues using a 5-point Likert scale before and after the simulation.

Results:
Three cohorts of students (n=20) will participate in this study between September 2016 and February 2017. The data collected from the questionnaires will be analysed using a Mann-Whitney U test or Paired T test depending on data distribution.

Preliminary results analysed with a Mann-Witney U showed that Knowledge changed from 2.2 to 4 with a p value

Discussion:
Improving healthcare professionals recognition of deteriorating maternal mental health is a key recommendation from the 2015 MBRRACE report. We believe that successfully teaching undergraduates to recognise and manage maternal mental health issues will be hugely beneficial to the care of vulnerable women. The aim will be to introduce this teaching session to all professionals involved in maternity services at a perinatal mental health education day to be held in July at the Swindon Academy.

References:

Ref: 509, Board: H12
Paper withdrawn
Challenges within Obstetric healthcare – teaching undergraduates about Substance Misuse using simulation
J Taylor, J Moffatt, C Sullivan
Swindon Academy

Background:
Two percent of pregnancies are estimated to be affected by substance misuse and alcohol excess, with the majority of these women misusing multiple substances. This has a significant impact on maternal health and increases the odds of maternal death through pregnancy and in the postpartum period. From 2009-2013 there were 58 deaths maternal deaths due to substance misuse, and 14 maternal suicides associated with substance misuse(1). There is an associated negative impact on neonatal outcome, which can be linked to late obstetric booking, poor compliance with antenatal care(2), and the physical effects of substance misuse on the foetus. Appropriate management of these pregnancies can improve most maternal and neonatal outcomes, however, women who misuse substances often have multiple vulnerabilities and consultations require complex communication skills. The Royal College of Obstetrics and Gynaecology (RCOG) undergraduate curriculum requires an understanding of the impact of social problems in high risk pregnancies. In practice, this may be hard for students to achieve, depending on the area of their placement, and willingness of mothers to involve students in their care. At Swindon Academy, previous simulation sessions focused on signs of domestic violence, and communication skills in this context, have proved very successful. We propose that students can benefit similarly from simulation teaching on substance misuse in pregnancy.

Methodology:
We have designed a simulation session on substance misuse during pregnancy with support from the specialist midwife for safeguarding services in Swindon. This will be run for undergraduate students during their clinical Obstetrics and Gynaecology attachment. Before the session students will complete an anonymous questionnaire rating their knowledge and confidence in managing maternal substance misuse using a 5-point Likert scale. Following the simulation students will be asked again to rate their knowledge and confidence and we will directly compare the results.

Results:
Three cohorts of students (n=20) will participate in this study between September 2016 and February 2017. The data collected from the questionnaires will be analysed using a paired T-test or Mann-whitney U test depending on distribution of data. Preliminary data shows that students’ self-reported knowledge improved from 2.4 to 3.6 with (p = 0.018), and confidence improved from 2.2 to 3.6 (p = 0.01)

Discussion:
Successfully teaching undergraduates to recognise and manage the complexities of substance misuse in pregnancy will be hugely beneficial to care of vulnerable women. The aim will be to introduce this teaching session to all professionals involved in maternity services and to make the simulation accessible at a women’s health conference to be held at Swindon in July 2017.

References:
2. NICE. Pregnancy and complex social factors: a model for service provision for pregnant women with complex social factors. 2010 Available from: https://www.nice.org.uk/guidance/cg110

Ref: 508, Board: H14
Conceptual review of clinical entrustment and the impact on learner self-efficacy and motivation
Katharine Rankin, H Cameron, A Jaap
University of Edinburgh

Background:
The concept of Entrustable Professional Activities (EPAs) has begun to be introduced to try to provide a potential bridge between the theoretical aspects of competency-based education and clinical care(1). Originally conceived for postgraduate training, EPAs have been described as “units of professional practice, defined as tasks or responsibilities to be entrusted to the unsupervised execution of a trainee once they have attained sufficient specific competence”(2): a means of translating these competencies into clinical practice(3). The EPA framework set forth by ten Cate scales up entrustment and supervision as follows: not allowed to practice; allowed to practice under full supervision; allowed to practice under reactive supervision; allowed to practice unsupervised; allowed to supervise others(4).

It has been suggested that similar tools could have a place in undergraduate medical education and in 2014 the Association of American Medical Colleges published a list of 13 core EPAs(5). These include generic clinical skills which graduates are expected to perform unsupervised on the first day of residency. However these are as yet untested in practice. In order to develop a suite of EPAs for our own final year medical students, it is first important to garner a theoretical understanding of the entrustment process itself. There is an existing body of literature on the entrustment process from the perspective of the supervisor(6,7) and the trainee contribution to this process has been discussed in terms of trainee attributes including their competence, attitudes and self-confidence(6). This evidence is mainly limited to postgraduates. Our research aims to augment this literature by focusing specifically on entrustment from the perspective of the learner, including undergraduates. How does a student/trainee learn to trust in themselves that they are capable of carrying out a task unsupervised? Can we utilise entrustment to improve student self-efficacy and what, if any, impact does entrustment have on self-determination and learning motivation?

Methodology:
We carried out a systematic search of the literature relating to entrustment of clinical activities to both final year medical students and newly qualified doctors in their early postgraduate years. We subsequently used a framework of self-efficacy, self-determination and learning motivation to complete a conceptual review.

Results:
The results of the conceptual review will be presented highlighting insights generated on the topic of entrustment from the student/trainee perspective, alongside hypotheses of how these could be utilised to improve student self-efficacy, self-determination and learner motivation.

Discussion:
This conceptual review augments our understanding of the entrustment process by specifically considering this interaction from the perspective of the student/trainee and how this style of assessment, and the information it would generate, may plausibly impact on student/trainee beliefs about their own abilities and motivation. It provides theoretical plausibility to the potential educational benefits of EPAs for the learner. Future research is required to determine if these theoretical benefits are borne out in reality when these tools are implemented.

References:
Diversifying traditional teaching hierarchies: What makes a successful exam-focused teaching programme run by foundation year doctors for final year medical students?
B Warner, S-J Harris, E Parsons, P Reid
Oxford University

Background:
Teaching is a core duty of a doctor [1]. Near-peer teaching, or instruction delivered by teachers of a similar level to the student, is recognised as an effective approach in medical student teaching [2], which can produce outcomes comparable to or better than consultant-led sessions [3].
Engaging in teaching develops understanding of a concept and confidence in large-group presentations, and is thereby beneficial to teachers as well as students.
Traditionally, written exam-focused teaching is provided by senior doctors and scientists. However, there can be discord between students’ needs and consultant doctors’ education approaches [4], which teaching from more junior doctors who have recently passed final medical examinations may avoid.
This work aimed to design an exam-focused course producing good learning outcomes for both students and teachers, through diversifying traditional teaching hierarchies.

Methodology:
4 Foundation Year 1 (FY1) doctors at Oxford University Hospitals NHS Foundation Trust identified that Oxford University Medical school students received considerably less teaching for multiple-choice question (MCQs) than short answer-style questions in preparation for final examinations.
73 students attended sessions. We constructed a four-month series of weekly sessions using the medical school syllabus to guide choice of topics according to specialty area. Each session consisted of approximately 35 MCQ A-E style questions, written by the teaching FY1s, which were answered under timed conditions and then discussed. Each session was run twice in order to facilitate attendance and group interaction.
We distributed questionnaires assessing confidence in passing medical school final examinations and readiness to be a junior doctor at the beginning and end of the course, to determine the students’ overall subjective improvement. Feedback was collected after each session to gauge its relevance to students’ needs, effectiveness of teacher delivery, appropriate question difficulty and overall helpfulness.

Results:
Where 1=strongly disagree and 5=strongly agree,
97.9% students rated relevance ≥4/5.
94.5% students rated difficulty ≥4/5
93.1.9% students rated delivery ≥4/5
97.2% students rated overall helpfulness ≥4/5
Confidence in passing finals increased by 2.2/5 (p

Discussion:
This teaching course received excellent feedback for relevance, difficulty of questions, session delivery and overall usefulness. Confidence in passing finals was increased with statistical significance at the end of the course compared with the beginning. Key themes contributing to success were relevance of topics (links to syllabus, common clinical scenarios), effective explanations (using diagrams, analogies, anecdotes; beneficial to teachers as well as students), near-peer teaching (facilitating interaction and provoking teacher reflection), session pace and teaching environment.
The FY1 teachers developed confidence with large-group teaching and felt that they had gained better understanding of the topics they had presented.
Limitations of this work include that exam preparedness is likely to have been improving due to external teaching and students’ own revision, and so confounding will have influenced our outcomes. It is further noted that confidence in readiness to be an FY1 doctor was increased by a smaller margin. This outcome was a secondary aim of the course, as it was primarily focused on examination preparation.
Overall, this course demonstrates that traditional teaching hierarchy, whereby junior doctors lead small-group ward-based teaching and seniors take responsibility for written examination preparation, can be diversified. This is effective both for providing a well-received course and improving student confidence, and for developing FY1 doctors as clinical teachers. We recommend this approach to other junior doctors and course organisers.
References:
Rashid M, Sobowale O, Gore D. A near-peer teaching program designed, developed and delivered exclusively by recent medical graduates for final year medical students sitting the final objective structured clinical examination (OSCE). BMC Medical Education. 2011. 11:11

Ref: 254, Board: I1
Dyspraxia in Medical Education: A Systematic Review of the Literature

E Walker, S Shaw, J Price, J Anderson
Brighton and Sussex Medical School

Background:
Dyspraxia has a similar prevalence to dyslexia in the UK general population at 6-10% (1). However, although there is now growing evidence regarding the difficulties experienced by and support needed for medical students and doctors with dyslexia (2-4), there has been little research focusing specifically on dyspraxia within Medical Education. Therefore, this review considers evidence from Higher Education, medical and para-medical professional literature, looking at individuals’ dyspraxia and its effect on their educational experience. This allows inferences to be made with regard to experiences of medical students.

Methodology:
The following databases were searched with no restrictions: Medline; CINAHL; ERIC; PsychInfo; and The Cochrane Library. Google Scholar was also searched for completeness. Papers were accepted if they related to experiences of dyspraxia within education or medical professionals.

Results:
Seven Papers were included in the final review. Five related to Higher Education students, one related to doctors, and one related to nursing students.
The current literature highlights two main perspectives of dyspraxia; a ‘difference’ view and a ‘medical/deficit view’ (4). The ‘difference’ perspective is associated with individuals identifying their strengths and being determined to overcome their problems. The ‘medical/deficit’ view leads to the individual focusing on their areas of weakness and leads to increased external support (4-6). Individuals have described specific problems with coordination and organisation, which influence their career choices and their decision to disclose to colleagues and peers (4-6).

Discussion:
This review has revealed some interesting comparisons from Higher Education and other healthcare professions in relation to medical students. However, as the unique experience and culture of Medical Education places a greater emphasis on practical skills than other academic subjects, further discipline-specific study will be required.

References:

Ref: 130, Board: I2
Educational Fellows in the Emergency Department; an innovative and cost effective educational project with excellent student satisfaction
L Staveley-Wadham, D McLernon-Billows, E De Sausmarez, C Bradshaw, R Galloway
Western Sussex Hospitals NHS Foundation Trust

Background:
The Emergency Department (ED) provides a rich learning environment for medical students. Balancing clinical demands with teaching is notoriously difficult for staff however.1 One study found expert educators utilise up to 14 different teaching methods to cope with varied caseload, learner experience and time pressures in ED.2 This is not always possible however and can result in poor student satisfaction and substandard learning.

Educational Fellow (EF) locum appointment for service posts have become an increasingly popular adjunct to undergraduate medical education, bringing varied benefit to both student and fellow.3,4 In 2015-16 Brighton and Sussex University Hospitals Trust (BSUH) employed four EFs in an attempt to provide a dedicated teaching program for Brighton and Sussex Medical School (BSMS) students in the ED.5 Post-F2 doctors were recruited on the basis of a keen interest in medical education and emergency medicine. They worked a combination of clinical shifts and protected teaching shifts in the ED with zero clinical commitment. Second, third and fifth year BSMS students undertook three hour, one week, and two week ED placements respectively with an allocated EF in groups of six. In addition to their teaching duties, each EF covered 1,025 hours of ED rota gaps annually.

To the best of our knowledge this is the first EF post of its kind that enables year-round, protected "shop floor" teaching by post-F2 doctors in the ED, whilst simultaneously reducing a reliance on expensive locums to fill rota gaps.

We set out to review student reported satisfaction with their EF-mentored ED rotations. In addition, we explored the financial viability of the program.

Methodology:
Each student was asked to anonymously rate their educational experience from 1 (low) to 5 (high) in three areas: 1) overall enjoyment of placement; 2) overall usefulness of the EF and 3) overall organisation of placement. Free space was also provided for general comments. Financial information was collected from the EF Consultant Lead.

Results:
Approximately 336 medical students passed through ED between Sept 2015 and July 2016. Average scores were high in all domains from 233 feedback forms received: 4.9 (overall enjoyment); 5.0 (usefulness of EF); 5.0 (organisation of placement). 87% of students (203 of 233) rated 5/5 in each domain. Feedback was overwhelmingly positive and praised the exposure to a broad spectrum of cases in a structured, non-judgemental, and supported environment. Students reported improved confidence with history taking, examination skills and practical procedures. Many students also cited a new interest in emergency medicine as a career.

Total annual expenditure on the four EFs was £210,000. Estimated total annual income from Department of Health Service Increment for Training (SIFT) was £100,000. Total costs saved on rota gaps filled by EFs estimated at £164,000 (assuming £40 per hour locum rate). The EF program therefore saved a potential £54,000 for the department.

Discussion:
Students were overwhelmingly positive about having a dedicated EF in the ED. Many commented it was the most valuable placement of medical school, and the first time they had had continuous observation and feedback on their clinical skills. We have also seen that an EF program may actually be cost-saving for EDs as it reduces a reliance on expensive locums.

Educational fellows can provide a cost-effective way of improving the learning experience of medical students in busy Emergency Departments. Already BSUH has boosted its next intake of EFs to six, with neighbouring EDs also recruiting their own cohort of EFs. The positive impact of the EF role in the ED is multi-faceted, with their activities inspiring students to consider a career in Emergency Medicine. Patient care is also improved, as EFs facilitate the students’ grasp of a diverse range of clinical activities in a safe, structured, and well-supported learning environment.

References:


Exploring student and trainee perceptions about postgraduate specialty training
T Reynolds, J Morgan
North Bristol Academy, Southmead Hospital, North Bristol NHS Trust

Background:
Recent changes in specialty training are placing more and more pressure on junior doctors to make decisions about choosing a clinical specialty at an early stage in their career path. Choosing a specialty can be a very difficult decision and not something that is covered in great depth during most undergraduate medical curricula. Most Royal Colleges offer information about their individual specialty but more generalised and impartial advice can be hard to find 1,2,3.
This study aims to explore the attitudes and perceptions of medical students about what factors they think would be important when deciding to commence specialty training in rheumatology and finding out whether these elements remained important amongst postgraduate rheumatology specialty trainees who have already chosen their career path.

Methodology:
An initial focus group was held with third year medical students from the University of Bristol during their undergraduate rheumatology placement to find out about their views and opinions. Student perceptions were explored in more detail with a questionnaire survey. A further questionnaire based on the areas identified from the medical students was distributed amongst rheumatology specialty trainees in Severn and Wales deaneries and the responses were analysed.

Results:
The initial focus group revealed that students feel confused by terminology regarding grades of doctors along with what training schemes are available after qualifying and how these relate to individual careers. Students do not feel adequately prepared to make decisions about their career path and are keen for further guidance but struggle to know where to look. Analysis of the questionnaire surveys completed by 11 students and 13 rheumatology trainees demonstrated that both groups feel that time and distance of commute are very important, along with work-life balance and fitting around family situation. Trainees were prepared to commute longer distances (providing advanced notice was given and this was for a finite period of time) but wanted greater continuity in terms of fewer hospitals visited during their training than students perceived. Students felt that competition ratios for training places and Consultant jobs would be more important than trainees did. Students prioritised a varied demographic of patients but this was not reflected in trainee feedback. Trainees emphasised the importance of clinical interest in their specialty along with the influence of inspirational patients or mentors in deciding upon their specialty.

Discussion:
Choosing a clinical specialty is a difficult and confusing process for medical students. This study suggests that the importance of individual factors changes over time and as we progress along our different career and life paths. Furthermore, inspiration to choose a particular career path can come from a variety of sources and it is important not to be put off applying for a competitive specialty if that is what you want to do. As a result of this project students are being signposted towards local careers services, online resources such as those provided by the British Medical Association and recent articles from the British Medical Journal careers section5, 6. This study has highlighted an area where further resources are needed to provide additional support to our medical undergraduates.

References:

Ref: 104, Board: I4
Exploring the value of service learning: How does offering health promotion sessions in Project LIGHT benefit medical students?
L Bleazard, E Anderson, S Malcherczyk, D Kinnair
University of Leicester

Background:
Homeless populations experience some of the worst health outcomes. Undergraduate medical students in the United Kingdom (UK) rarely interact with these populations as many are within the care of the voluntary sector. In North America, students run health promotion and diagnostic clinics targeted at these populations using an educational method known as ‘service-learning’. Evidence suggests that service-learning benefits healthcare students by improving their confidence, challenging stereotypical thinking, and increasing their understanding of the social determinants of health. However, little is known about the impact of service-learning programs in the UK. Project LIGHT is a unique service-learning opportunity for medical students at the University of Leicester which commenced in 2010. In collaboration with a local charitable organisation, Action Homeless, students prepare and deliver health promotion sessions to homeless people.

Methodology:
This study aims to identify what medical students’ gain from their involvement with Project LIGHT, tracking some of the 170 students who have taken part in various activities, including the delivery of health promotion sessions, as part of their special study modules. The qualitative approach seeks to gain a detailed insight into the participants’ lived experiences. Medical students and recent graduates from the University of Leicester are invited to participate. Participants complete a semi-structured audio-recorded interview. The transcribed data are analysed using thematic analysis in NVivo. The interviews will be completed by May 2017, when the data may have reached saturation.

Results:
Analysis on the final data set will be presented. Results so far (n=10) indicate that students highly valued engagement with service learning and find it has improved their confidence for interacting with homeless people; “I’d be more open to talk to them...and find out about their social situation, their background.” Students have gained a greater understanding of the services available to patients affected by homelessness; “Before Project LIGHT I wouldn’t have known anything about it...but now I actually know...there are places you can point people towards, and I’m better equipped now [to do that]”. Stereotypical beliefs about the homeless populations have been challenged; “It’s a very misunderstood population, and there are a lot of negative preconceptions...and when you actually work with them, some of those preconceptions are not true at all, and they’re just normal people who’ve perhaps been unlucky”. The majority of students feel better prepared for working with challenging groups when qualified. Students felt this should be part of everyone’s medical training.

Discussion:
Benefits for students in the UK mirror those of students in North America. The work locally has become interprofessional, including the involvement of law students in 2016. Leicester’s new medical curriculum has created curriculum space for all medical students to learn about homeless people and have contact with community groups. Project LIGHT is growing and has recently included police training on negotiation skills. Further on-going research is required to follow the learning of these students when qualified.

References:

Ref: 124, Board: I5
Extending simulation to the specialities: Acute oncology simulation

L Evans, J Hartland, A Kendall
Swindon Academy, Great Western Hospital

Background:
Oncology undergraduate teaching has historically been neglected with only 36% of medical schools including dedicated oncology teaching in their curriculums in 2011 (1). Final year medical students at Bristol University receive dedicated oncology teaching at various academies usually delivered as lecture based tutorials or small group teaching. Simulation is a successful method of delivering undergraduate oncology teaching however it has not been widely adopted by oncologists(2). This is reflected in practice as simulation in general medicine and surgery is widely delivered to final year Bristol medical students on placement at the Great Western Hospital (GWH) Swindon Academy but oncology simulation has not been adopted. Neutropenic sepsis is an acute oncological emergency and the National Confidential Enquiry into Patient Outcome and Death identified inadequate management of neutropenic sepsis leading to avoidable deaths (3). A survey of newly qualified FY1 doctors in 2011 demonstrated only 11% felt prepared for dealing with oncological emergencies (4). Therefore a neutropenic sepsis simulation was piloted to assess whether simulation should be formally adopted to deliver acute oncology teaching method for final year students.

Methodology:
In addition to the traditional acute oncology lecture which included neutropenic sepsis, a neutropenic sepsis simulation case was offered during the same week to all final year medical students at GWH. 33 out of 35 students attended the simulation voluntarily which was scheduled mainly out of hours. 26 students completed an electronic feedback form following the simulation. A 5 point Likert scale assessing their confidence in the management, prescribing skills and communication skills before and after the simulation was used.

Results:
The average student confidence level in:
Managing neutropenic sepsis was 2.5 before the simulation rising to 4.0 afterwards
Prescribing for neutropenic sepsis was 2.3 before the simulation rising to 3.9 afterwards
Communication skills and SBAR handover increased from 3.0 before the simulation to 3.8 afterwards
Additionally 96% of students rated the overall simulation ‘very highly’ and 92% of students strongly agreed that simulation was an effective way to learn about neutropenic sepsis. Further statistical analysis is being undertaken to ascertain the statistical relevance.

Discussion:
Despite all students receiving teaching covering neutropenic sepsis prior to the simulation, the students’ confidence in the management of neutropenic sepsis was relatively low at 2.5/5. Although student’s feedback from the traditional session showed it was well received, it suggests that it is not the best way in students learning the management of conditions. This supports Kolb’s experiential learning theory that “knowledge is created through transformation of experience” (5). This simulation has demonstrated increased confidence in the management of neutropenic sepsis compared to traditional teaching methods alone. During simulation certain gaps in knowledge were highlighted such as practicalities around including PICC line identification, infection risk and use and addressed in the debrief. This pilot has demonstrated that acute oncology simulation can improve confidence of undergraduate medical students. It will be formally adopted as part of acute oncology teaching at GWH for final year medical students this year.

References:

Ref: 212, Board: 16
From medical student to medical doctor: an 8-year experience of preparing undergraduates for managing the sick child
S Li, W Carroll
Nottingham Children's Hospital

Background:
Preparing medical students with the necessary clinical skills to manage emergency situations a newly qualified foundation doctor may encounter can be challenging in the clinical setting. Simulation-based teaching is one method by which the learner can achieve such competencies where the educator can create a safe and structured environment for the learner whilst mitigating risks to patients (1) (2). Despite being fully engrained within postgraduate medical education undergraduate medical students may be unfamiliar with this method of learning and so simulation training is often created to match their level of experience as well as to align its objectives to the undergraduate curriculum (3). Undergraduate medical students studying their child health attachment at Derbyshire Children’s Hospital undertake the Paediatric Life Support (PLS) course. This well established course is provided by the Advanced Life Support Group who coordinate a number of training course in the management of medical emergencies. The PLS course is designed for doctors, nurses and professions allied to medicine rather than medical students. We sought to evaluate medical students perceptions towards the course over an 8-year period.

Methodology:
Evaluation forms regarding the PLS course from fourth year medical students undertaking their child health attachment between 2008-2015 at Derbyshire Children’s Hospital were collated and analysed. Mean and median scores medical students perceptions of the utility of the PLS course were derived. Thematic analysis was used to analyse free text comments using NVivo for Mac and common themes derived.

Results:
775 medical students have participated in the PLS course between July 2008 to May 2015. Students mean satisfaction of the course was 9.3 (out of 10) with a median score of 10. Over the period of 2008-2015 yearly mean scores were at least 8.9.
Four key themes were identified from the free text comments. These were course usefulness; preparation for the future; increased confidence in emergency situations; and acquiring new knowledge and practical skills.

Discussion:
The introduction of an accredited PLS course for medical students has been successful and is widely appreciated by them. Students recognised the future implications of undertaking such a course in preparation as a doctor providing increased confidence in managing emergency situations that cannot otherwise be achieved in didactic teaching. Moreover, we would advocate the use of established courses traditionally designed for postgraduate students which provide high quality educational value without the need to adapt them for undergraduate student.

References:
Goodwill mentoring: what are the obstacles to effective mentoring of final year medical students?
H Bothwell, A Stanton, K Jones
Swindon Academy

Background:
Mentoring is recognised as a valuable method of providing multi-faceted professional support to junior medical colleagues. Previous mentoring schemes offered to medical students at Swindon Academy have reported positive feedback from the both mentees and mentors.(1)(2) Final year medical students have the daunting task of completing written exams, achieving clinical competency and preparing to practice as clinicians, therefore, the support offered by a mentor can contribute to their well-being. There has been some discussion of the obstacles to effective mentoring and these include the busy working environment for mentors and mentees alike.(1) Through on-going evaluation of mentoring schemes further insight into the difficulties and limitations of these programmes can improve the implementation of this vital support network.

Methodology:
Final year medical students (n=35) on placement at Great Western Hospital were allocated a mentor from a cohort of junior doctors who had volunteered and undergone a training session in mentoring. Each student was also allocated an associate clinical teaching fellow(CTF), acting as both a second mentor (if necessary) and a point of contact for the mentors themselves. Feedback was collected from the students at the end of their placement as well as from the mentors and associate CTFs. Quantitative feedback from mentees and mentors was collected in the format of a Likert-type scale.

Results:
Data is still being collected from participants, including mentor and CTFs. This will be a combination of quantitative and qualitative feedback. Qualitative feedback will undergo thematic analysis to identify key benefits of the mentoring scheme as well as obstacles encountered by participants.

Discussion:
Discussion will be based on the obstacles identified by the participants.

References:

Ref: 297, Board: I8
Haematology Million Pound Drop – does gamefication in haematology enhance undergraduate medical training?
J Wolf, L Carter-Brzezinski, R Peck, J Sansom
University Bristol NHS Foundation Trust

Background:
In recent years the utilisation of games to supplement classical medical education has enjoyed increasing popularity. A wide variety of games have been used to teach anything from complex patient management (1) to patient flow (2). While there is currently no definitive data confirming or refuting effectiveness (3) of games in medical education, literature suggests that games can enhance learning by providing active experience (4), an important component of Kolb’s learning cycle (5).

Haematology, like other partially laboratory based specialties, is often viewed as a challenging topic by medical undergraduates. Despite this, haematological conditions can affect all other aspects of medicine and therefore sound knowledge of the speciality is essential.

Historically student feedback on haematology rotations and teaching at the Bristol Royal Infirmary (BRI) has been lower than average. We designed a novel medical education game, the “Haematology Million Pound Drop”, as a fun way of educating medical students about haematology. This study explores the benefits and challenges of games in the haematology curriculum.

Methodology:
A board game (not really a board game in the classical sense) based on the popular TV show “Million Pound Drop” was designed for year 3 medical students during their pathology rotation at BRI. Students were randomly divided into two groups. Group A completed a 6 week rotation in haematology, which included lectures, clinical teaching, tutorials and mentoring. Group B received the same teaching but additionally took part in our game. Group A was later also given the opportunity to participate.

Students completed pre and post intervention questionnaires as well as blank space questions about their experience. Confidence in recognition, assessment, management of haematological conditions and blood films was scored on a 5 point Likert scale.

Results:
Analysis of pre and post intervention questionnaires and student perceptions of the game will be presented at the conference.

Discussion:
It is anticipated that our novel game based on case questions and data interpretation will appeal to all learning styles and will therefore increase student engagement in the learning process. We hope that this type of group competition will give further incentive to study the topics which will lead to overall improved student knowledge, confidence and satisfaction. Further evaluation of student assessment performance may help determine the effectiveness of this type of learning.

References:
Healthcare Assistantship Programme
C Broughton, C Page, C Pye, E Wates, R Marshall, J Sansom
South Bristol Academy, University Hospitals Bristol

Background:
The University of Bristol is developing a new undergraduate medical school curriculum, MB21, with the final year consisting of an apprenticeship, leading to simultaneous graduation and GMC registration [1]. One of the challenges medical students face is preparing for clinical practice [2]. Evidence indicates that medical students who have experience working as a healthcare assistant (HCA) develop skills including empathy, working as part of a multidisciplinary team and confidence in the clinical environment [3]. The aim of the HCA programme is to introduce medical students to the clinical environment at a much earlier stage in their training, year one.
The HCA programme was piloted with a group of second year medical students at South Bristol Academy, University Hospitals Bristol NHS trust. The aim of the pilot was to identify any potential problems with the programme and to gain feedback about students’ perceptions of the project. This abstract describes the results from the pilot study.

Methodology:
Second year medical students, from the University of Bristol, were invited to take part in the pilot. This took place at University Hospitals Bristol NHS trust in October 2016. Each student was required to attend a seven hour shift between 7am and 2pm to work as a HCA. Students were placed with an experienced HCA on adult medical and surgical wards. To differentiate students from medical and nursing students, they were given a polo shirt with a ‘Bristol Student’ logo. They were required to assist with all aspects of the HCA’s role.
Following the shifts, students were invited to a focus group. In addition, questionnaires were distributed to all students invited to participate to explore their attitudes towards a HCA programme, and to gain insight into motivation to participate and potential benefits. Informal feedback was obtained from nursing staff on the wards.

Results:
32 out of 60 medical students’ volunteered to participate in the pilot. Of these, 25 students’ completed a HCA shift.
16 students, 64% of those taking part in the pilot, attended the focus group. 55 questionnaires were completed; an overall response rate of 91.6% (55/60).
Following the HCA shift, when questioned how working as HCA benefited them, 58.3% (14/24) felt they had a better understanding of patients’ needs and 20.8% (5/24) had improved understanding of different healthcare professional roles. These views were supported by findings from the focus group: “It made me appreciate what HCA’s do and what dependence doctors have on them”. All students participating had a greater respect and understanding of the role of an HCA after working with them. Feedback from students participating in the pilot indicates that shadowing HCAs’ is beneficial to medical students’. Four major themes arose from the focus groups: teamwork, communication with patients and staff, the role of HCAs’ and other healthcare professionals and improved knowledge of how the ward works, how to read observation and drug charts, disease and treatments.

Discussion:
This pilot has highlighted that working closely with a healthcare assistant is an innovative and valuable way of educating medical students about the role of other health care professionals and the importance of communication and teamwork. The HCA project encourages situated learning, enabling students to develop these important skills as well as patient contact early on in their training [4]. Feedback from nursing staff and HCAs’ indicate that they welcome working with first year students; it benefits mutual understanding of the different roles involved in effective patient care as well as fostering the development of patient centred doctors. Furthermore, this additional experience will hopefully improve students’ confidence in the clinical environment and preparation for clinical practice.

References:

Ref: 052, Board: I10
Implementation of a critical appraisal skills and evidence-based medicine workshop for medical students
C Yu, M Elsaddig, N Yau, C Hill, E Fowler, K Jones
The Academy, Great Western Hospital

Background:
Evidence based medicine is ‘the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients’ achieved by ‘integrating individual clinical expertise with the best available external clinical evidence from systematic research’. (1) This has been a cornerstone in modern medical education and practice and as such, it is essential that medical students obtain the skills for effective critical appraisal. This reflects the GMC’s guidance on expected outcomes for graduates. (2) As research has identified that education in critical appraisal at the undergraduate level is more effective than later in their career, we assessed students’ confidence in their skills in critical appraisal and designed a workshop as a pilot to determine whether such intervention is sufficient to develop students’ skills in critical appraisal and whether it is feasible to continue this as a series of workshops across a short timeframe to maximise students’ learning. (3) There are also opportunities in the workshop to explore peer-assisted learning, which has been shown to be effective and helps students to develop as independent learners. (4)

Methodology:
Focus groups with teaching staff students were run to identify the needs of our local student population in Swindon and this was used to inform the development of a workshop for third year medical students to develop their skills in critical appraisal.
The interactive workshop was developed with a mix of tutorial, problem-based learning and peer assessment. Self-assessments completed by the third and fourth year medical students were used to determine their understanding of literature searching, aspects of critical appraisal and types of research to assess their entry-level knowledge and whether this teaching intervention has resulted in a self-perceived improvement. A formative assessment (pre- and post-session) will provide a quantitative evaluation on the success of this workshop.

Results:
Preliminary data suggests that students would benefit from a critical appraisal skills workshop and the implementation of this is underway, with a planned session in February 2017.

Discussion:
Following on from this workshop, we hope to trial a series of further tutor-facilitated sessions whereby students can further develop their skills in a peer-assisted learning environment. If successful, we hope to offer this teaching intervention to subsequent cohorts of students.

References:

Ref: 320, Board: I11
Integrating diversity factors into communication skills teaching
A Ward, N Dogra
University of Leicester Medical School

Background:
Healthcare professionals, educators and patients all make assumptions about others and we need to be aware of this so that we can challenge ourselves and each other and minimise the impact assumptions have on our interactions. Therefore, diversity education should aim to foster a person-centred approach to interactions and teach behaviours that demonstrate respectful curiosity and empathy. It is based on the premise that each person is unique and their identity is multifaceted. In the first year of the medical curriculum at Leicester, teaching has been developed using the model of cultural sensibility as a theoretical framework:

- The expectation is that students are aware of broad psychosocial issues that can affect the way individuals perceive health and access health services.
- The focus should be on self-reflection and awareness of the interaction between two individuals, generating effective, shared understanding and dialogue.
- The aim should be acquisition of a method for acknowledging difference, and working with it in a constructive and positive way.
- Difference between the doctor and patient is potentially present in all encounters and not just those where ethnicity differs.
- Conscious awareness of bias is important.

Methodology:
As part of the Compassionate Holistic Diagnostic Detective course at Leicester, a component of the diversity education takes place within communication skills training. Student role plays have been developed to allow experiential learning. This encourages the learners to:

- Compare and contrast the differences between a conversation and a clinical consultation
- Critically evaluate a range of communication and consultation styles
- Compare and contrast the differences between interviewing children, adolescents and adults at different life stages and factors that may influence the process
- Identify other factors related to diversity and the ways in which they may influence the consultation process
- Reflect on their own perspectives and how these might influence the consultation process
- Identify their own strengths and limitations regarding communication and consultation

Example role play scenario:
Teresa is in her mid-20s and extremely angry that she had to take time of work to visit as no appointments could be accommodated when she was free. She has had a sore throat for 2 days. She feels the practice is more interested in being politically correct rather than providing a good service and that immigrants get priority for appointments. As the appointment progresses she becomes angrier and angrier.

Discussion for group:
What responses did the patient generate in you? How would you manage these? Does it make you feel different if a male or female patient is getting angry?

Results:
This teaching is due to be delivered for the first time to small groups of first year medical students on the new curriculum at Leicester in February 2017. Feedback will be collected from students, tutors and focus groups and presented with the poster.

Discussion:
Diversity education should not be focused on individual characteristics such as ethnicity or sexuality. It is important that students do not feel that covering diversity is a tick–box or endpoint exercise, superficial tokenism or merely political correctness. Teaching should avoid stereotypical, categorical information and not force certain attitudes. In integrating diversity within clinical communication teaching students should be enabled to identify their strengths and the areas they find challenging so that they can specifically address these. It also highlights the necessity to be aware of diversity aspects and their influence on practice. It is envisioned that sessions built on role-plays in this way could be widely used in undergraduate and postgraduate medical education to ensure students acquire the appropriate skills to work with diversity in a constructive way but with a clear educational framework that supports the teaching.
References:

Ref: 047, Board: I12
Lights. Camera. Action...Reflection?
H Bothwell, C Ashton, K Jones
Swindon Academy

Background:
The General Medical Council describes communication skills as a fundamental component of effective clinical practice and evidence supports offering specific teaching to facilitate students’ development of this important ability(1)(2). Experiential learning of communication skills has been demonstrated as the more effective and many medical schools offer this in the form of role-play which is generally received positively by medical students (3). The use of video-recording in communication skills teaching has been shown to have a positive effect although this tends to focus on more junior medical students (3)(4). There is currently no evidence whether giving students access to their recorded consultation(s) after teaching facilitates any further learning or reflection.

Methodology:
A cohort of third year medical students was given a teaching session on communication skills (within the general practice setting), consisting of an introductory lecture followed by role-play with an actor. Each student had the opportunity to volunteer to have their individual consultation recorded. Feedback on their communication skills was given at the time by the actor, facilitator and peers. Students were then provided with a recording of their individual consultation, which they could then review independently. Students were then surveyed one week following as to whether they had subsequently viewed this recording and if they felt this had enhanced their learning or facilitated any further reflection.

Results:
Quantitative and qualitative feedback will be gathered from participants.

Discussion:

References:
1. General Medical Council (2013) Good Medical Practice
2. Aspegren K. BEME guide No. 2: teaching and learning communication skills in medicine: a review with quality grading of articles. Dundee: Association for Medical Education in Europe; 1999

Ref: 381, Board: I13
M@ST (Mentoring @ South Tees)
B Kawai-Calderhead, A Johnstone, M Li, A Ahmed
Defence Deanery, South Tees Hospitals NHS Foundation Trust

Background:
Background and Purpose
Medical students find the transition to doctor stressful and feel ill prepared for the physical and psychological demands of practice. Mentoring can support students by offering students holistic support and help promote wellbeing and resilience. In addition to this, near peers are better able to understand and therefore optimise students' learning. Mentoring and teaching is incorporated as a part of the General Medical Council’s (GMC) Good Medical Practice.

The M@ST (Mentoring @ South Tees) scheme was created in November 2015 with the aim of Foundation Year (FY) doctors providing holistic support to Newcastle University Students undergoing clinical placements at South Tees Hospitals NHS Foundation Trust.

Methodology:
A pilot mentoring scheme ran for 5 weeks in 2015, with a second 12-week iteration in 2016. In the 2016 cohort, 30 students were paired with 30 volunteer FY mentors. The scheme, in keeping with current medical education best practice, was learner-centred. An 8-station hour-long clinical skills session conducted under examination conditions was also organised. A pre and post-scheme questionnaire was completed by students in the 2016 cohort. Students were asked to rate their confidence using a Likert scale in four domains: clinical abilities, personal development, career development, and professional relationships. Freetext questions concerning the positive aspects and areas for improvement were also included.

Results:
93% (28) of students completed both the pre and post-scheme questionnaire. 87% (26) of students engaged with their mentor. The total mentoring time was over 200 hours – an average of over 7.5 hours per student. Over 10 hours of the total mentoring time was conducted through telephone calls or social media. A diverse range of activities took place during the mentoring time. The most common activity was shadowing on the ward, with 56% of pairs undertaking this activity. Other activities include history taking (52%), clinical examination (44%), clinical procedures (44%), procedural sign-off (36%). Non-clinical activities were also undertaken: medical school advice 48%, careers advice 40%. 24% of students undertook formative observed clinical examinations, with 53% of the cohort attending an organised clinical skills session under exam conditions. Of note, 89% (25) would recommend M@ST to a colleague and 82% (23) would like to continue in the mentoring system. 96% (27) expressed that they would like to be a mentor for medical students as an FY1 doctor.

Although there were no identifiable trends in the self-rated confidence in the four domains, there were 74 freetext comments on the positive aspects of the scheme. The most common positive aspects were: having a contact on the ward; having support, help and advice if needed; procedure sign-off; medical school and career advice from a near peer with recent, similar experiences.

Discussion:
Overall learner experience from the mentoring scheme was positive, with a large number of mentoring hours undertaken. Through the scheme, students were able to receive valuable clinical experience, teaching and careers advice. Engagement in the scheme was high, but a small minority of students did not engage with their mentors. This could perhaps be improved upon with a formal meet and greet session to introduce mentors and mentees. The positive impact of the scheme is shown through the fact that the vast majority of students felt they would like to be mentors in a similar scheme when qualified, thus completing the cycle.

References:
3. Harden, R., Crosby, J. AMEE Guide 20: The good teacher is more than a lecturer – the twelve roles of the teacher. Medical Teacher: 22(4);334-337.

Ref: 445, Board: I14

360 | Page
Made to measure: Tailored bedside teaching for final year medical students
A McDermott, M Brown, R Sheppeard, I Swart-Wilson, P Sykes, P Davies
A McDermott, Clinical Teaching Fellow, Gloucestershire Academy

Background:
It is recognised that there can be a difficult balance in preparing medical students for clinical practice and gateway examinations in their final year of study (1). Final year medical students often have a preference for self-directed home study, particularly in the approach to examinations (2). This is despite the close proximity to commencing clinical duties as a Foundation doctor, and could be interpreted as a response to curricular misalignment. Bedside teaching is an effective teaching strategy that addresses a multitude of skills including history taking, physical examination and professional attitudes (3). Although there has been a recognised decline in bedside teaching in undergraduate education, there is evidence to suggest it is still valued by both students and teachers (3). Furthermore, one-to-one bedside teaching can create an environment that supports active learning and results in an ability to customise teaching to the individual’s learning needs (4). The aim of this study is to evaluate a bespoke bedside teaching programme offered to final year medical students based at Gloucester Academy prior to final examinations.

Methodology:
A schedule of daily teaching sessions was developed to provide all final year medical students with an opportunity to request a ninety-minute slot each week. Sessions were learner-centred, and individually tailored to topics chosen by the student. Teaching was designed to bridge between learning core knowledge and developing clinical and professional skills. Sessions were facilitated through an online booking system and delivered over a four-month period over two hospital sites. Following final examinations, students were invited to complete an evaluation questionnaire from which qualitative and quantitative data has been collected. Key outcomes of the study include teaching efficacy, confidence in subject matter, and preparedness for clinical examinations.

Results:
In the student cohort, 97% voluntarily registered for the teaching sessions. Preliminary results suggest that the teaching was helpful for targeting gaps in knowledge, preparing for examinations and improving skills based confidence. Full results of the evaluation will be available for presentation.

Discussion:
The final year of medical school is a critical time in which to prepare students for entering the workplace, as well as undertaking examinations. Evidence suggests that students are rarely observed during their studies (5). This teaching innovation provides an opportunity to address this and to match the learning experience with the learner. Encouraging students to make time for bedside teaching during exam preparation is likely to improve knowledge base, and aid in the transition from medical student to doctor.

References:
Mapping the teaching of clinical reasoning in UK undergraduate medical curricula
D McLaughlin, A Silva, J Matthan, G Page
Durham University

Background:
Clinical reasoning (CR) is a key skill of the proficient clinician and is the process by which clinicians collect cues from patient presentations, process information, come to an understanding of a patient’s problem or situation, plan and implement interventions, evaluate outcomes, and reflect on and learn from the process. Despite the importance of CR in patient care, the literature suggests that the skill is rarely formally taught and assessed in medical schools, and qualified doctors often remain unsure how they perform the skill (1). The literature also suggests that adopting a formal educational approach to this skill may be beneficial for medical students (1-4), yet most medical schools do not specify where this is covered in their curricula. The General Medical Council’s (GMC’s) publication Outcomes for Graduates (5) specifies three outcomes that are aligned to the definition of CR as given above: 8c, 8g, and 14f. This study aimed to map how and where these outcomes are taught, in a representative sample of UK undergraduate medical curricula. This ‘map’ may be beneficial in helping medical schools learn from best practice in the sector.

Methodology:
The study design included both quantitative and qualitative aspects, featuring the use of an online questionnaire that yielded quantitative data as well as free text comments, with follow-up interviews. Data were analysed using a mixture of methods, including thematic analysis. Ethical approval for the study was granted by the Ethics Subcommittee of the School of Medicine, Pharmacy & Health at Durham University in June 2015. The study was performed by sending a link to the questionnaire to the person identified as the ‘Director of Teaching’ at all 33 UK undergraduate medical schools. He/she was asked to complete the questionnaire or to forward the request to a colleague. The questionnaire remained open for a period of 8 weeks from 10th June to 4th August 2015. Follow-up interviews were completed in the first three months of 2016.

Results:
42% (14/33) of UK undergraduate medical schools responded to the questionnaire. Analysis of responses indicated that the sample was broadly representative of UK undergraduate medical curricula in terms of geography and the type of programmes being offered by these schools. All respondent schools indicated that their students were exposed to teaching intended to help them meet GMC outcomes 8c, 8g and 14f. All three outcomes are delivered using a wide range of methods, with the majority of teaching occurring in ‘small group/tutorial/PBL sessions’, in ‘clinical/communication skills sessions’, or in ‘primary care placements’, although some variation in this exists, based on differences in the type of programme(s) on offer in the respondent schools. The coverage of outcomes 8c and 8g increases markedly as students move from the first two years of their programme into year 3, but there is a dip in teaching in the penultimate year before picking up again in the final year. In contrast, the coverage of outcome 14f rises steadily across the course of the degree, with greatest coverage in the final year.

Several respondent schools described a formal CR ‘strand’ in their curriculum, but no real consensus emerged on how best to teach CR. However, case-based discussions and general practice placements were frequently mentioned as settings in which this might best be done.

Discussion:
This study indicates that UK undergraduate medical school curricula are covering the three CR-related outcomes for graduates specified by the GMC, and that the pattern of delivery of these outcomes across the stages of medical degrees is appropriate. A wide range of teaching methods is used and some medical schools have adopted a formal approach to teaching of CR, which the literature suggests might be beneficial.

References:

Ref: 043, Board: J1
New Blood: Introducing medical students to blood transfusion through simulation
I Swart-Wilson, N Oxlade, M Johns, R Sheppeard, P Davies, R Frewin
Gloucester Academy, University of Bristol, Gloucestershire Royal Hospital, Great Western Road, GL1 3NN

Background:
The national haemovigilance scheme, Serious Hazards of Transfusion (SHOT), consistently highlights potentially avoidable errors in the decision making or prescribing of blood products involving junior medical staff (1). There is a recognised need to improve transfusion education as studies have demonstrated junior clinician knowledge deficits regarding safe transfusion practice (2,3). Improved education on appropriate use of blood and blood products would reduce potential harm to patients and overall healthcare costs (4,5).
Transfusion medicine often forms part of the undergraduate medical curriculum but there is a lack of uniformity and significant discrepancy in how this is delivered at the coalface (6). Medical students, as recognised by the General Medical Council, should be competent in the correct procedures to give a transfusion of blood into the vein of a patient. They should also be able to observe said patient for possible reactions, and respond appropriately (7). Simulation based education is increasing in popularity and can allow practical application of knowledge, skills, professionalism and teamwork (8).
The aim of this pilot study was to introduce medical students to blood transfusions and blood transfusion reactions using simulation.

Methodology:
University of Bristol third year medical students took part in this pilot study over the course of the 2016-2017 academic year. A simulation session was devised following peer review of content and in accordance with relevant university curricula. The session involved small group teaching and participation in simulated clinical scenarios. A pre and post session questionnaire using Likert scale and free text answers was administered. Data will undergo thematic and statistical analysis.

Results:
Full results will be available for presentation.

Discussion:
There is a well voiced need to improve blood transfusion education across all levels of training. Simulation can facilitate learning through experience and is recognised to have numerous benefits (8,9). Simulation can be an effective and popular way to apply theoretical knowledge to practise, although time and financial implications should be considered (8).
It is hoped that this pilot study will provide a realistic and safe environment for students to acquire a solid foundation of knowledge and practical skills early on in their medical training.

References:
Pandemic©: a novel way to teach and measure teamwork and communication
R Keegan, R Hsu, J Bethea
University of Leicester

Background:
Teamwork and communication have consistently been implicated as common theme when a root cause analysis is undertaken to investigate hospital ‘never events’ and serious incidents. Despite this, medical education has lagged behind other sectors, notably civil aviation, in providing dynamic, consistent and engaging ways to teach, examine and measure teamwork training ¹.

Medical schools may use simulators, in the form of ‘fake patients’ or simulated acute clinical scenarios; these rarely address inter-professional communication or the administrative side of being a doctor. Simulators are expensive, time consuming, and include no system of measuring overall improvement in team dynamics.

Pandemic© is a 2-4 player commercially available collaborative board game ². By applying a well-described theoretical framework created by Salas et al, we aimed to assess a novel and engaging approach to teamwork and create a way to quantitatively measure the impact such training has on students ³.

Methodology:
160 final year medical students in their final week at the University of Leicester were split into teams of 4 and allocated a copy of Pandemic© and a trained tutor. Tutors were of both clinical and non-clinical backgrounds. Students were given a brief lecture to contextualise the session, teams were then sent to large group rooms where up 12 teams could play at any one time. The students were given a set time to read the instructions, after which, they were given one hour to play the first game. Throughout this the tutor monitored team interactions and noted specific moments of play that led to complex interactions, difficult decisions or conflicts.

A template was created so that tutors could focus on the 6 C’s of teamwork. If a team won the game, their time was recorded and they were given the chance to a ring a bell notifying other teams that they had won. If a team lost or ran out of time this was also noted. Students were then given time to discuss points the tutor had noted, get individualised feedback and asked to make comparisons with clinical practice that they had seen on placements.

Feedback to students was recorded on Tophat© and a tutor focus group was conducted. Scores were analysed using a paired t test.

Results:
Teams were three times more likely to win the game after receiving group-specific feedback (9 vs. 29 wins, p=92% (n=91) of students found the session enjoyable, tutors reported that all groups gave positive feedback, even when students were not initially engaging they soon became involved. 71% (n=68) stated they had ‘a better understanding of how to recognise good teamwork’ and 76% (n=72) felt ‘the session taught them how to improve their own teamwork’. Students stated they could easily make comparisons in the skills demonstrated in the game with their clinical practice.

Discussion:
This project shows a novel technique for developing teamwork and communication skills. Our methods showed significant improvement in student performance after receiving teamwork orientated feedback using the Salas Criteria. This was shown not only by the student and tutor opinion but was quantitatively measured. Pandemic© proved a fun, enjoyable and cheap way of developing clinically relatable skills whilst under high pressure. Tutors who provided feedback which was clinically relevant did not require extensive training or hospital experience to attain significant results. The project’s positive outcomes divert from the mandate that all medical education must be within a medical context and addresses many of the gaps within simulated training.

References:
Patient feedback to students: views of tutors
P Wadsworth
University of Warwick

Background:
Background: GMC guidelines recommend that patients and carers are given the opportunity to provide medical students with feedback following every encounter. However, patient feedback is not a formalised part of the curriculum at Warwick Medical School (WMS), and the level of patient feedback that occurs on an ad hoc basis is unknown. The situation is likely to be similar across other UK medical schools. Patient feedback to students has many possible advantages including improving students’ clinical skills and confidence as well as maintaining the NHS ethos of incorporating the views of its service users in the shaping of its services.

Aims: In exploring if, and how, patient feedback should be incorporated into the curriculum, it is important to consider the views of the tutors involved in students’ education. This project aims to establish the following:

i. What are tutors’ views regarding the GMC guidelines that patients should be offered the opportunity to provide feedback to students following every student-patient encounter?

ii. What important elements should be considered in constructing a model for patient feedback to students?

Methodology:
Methods: Four focus groups were carried out at with a total of twenty-one participants, recruited using convenience sampling of tutors at Warwick Medical School from a variety of clinical backgrounds. The sessions were audio-recorded, transcribed verbatim, and a thematic analysis was carried out. Data saturation was reached, with six main themes arising from the data.

Results:
Results: Tutors confirmed that there is very little patient feedback currently being delivered to medical students, but agreed on multiple possible benefits including improved confidence and professional skills. While some tutors questioned the validity of feedback from patients, others pointed out the unique value of feedback from patients following a consultation that cannot be provided by a third party.

Discussion:
Conclusion: Tutors agreed that patient feedback could be of great value to medical students’ education. They concluded that a model for patient feedback would need to be implemented and delivered carefully, so as to reduce the risk of damage to students' confidence, or any detrimental effects to the patients.

References:

Ref: 319, Board: J4
Pilot Study: Is Team-based Learning (TBL) an effective strategy for blood-transfusion training?
C Hayes, A Hawarden, H Bradshaw, A Thomas, R Matsa, J Graham
Keele University

Background:
Receiving a blood transfusion is associated with multiple risks. The 2015 Serious Hazards of Transfusion (SHOT) report states approximately 1125/3288 (34.2%) of adverse incidents related to transfusion were preventable and due to mistakes. The SHOT steering group considers education to have a vital role in preventing errors. Current methods used to deliver transfusion training are deemed suboptimal.

TBL is a flipped-classroom, small-group teaching methodology that has been effectively used within undergraduate medical education although it is rarely used in the UK and has not yet been applied to blood transfusion training. There is encouraging evidence that TBL as a pedagogical methodology receives high levels of student satisfaction plus short-term benefits in knowledge retention across several disciplines.

This study aims to explore the attitudes of senior UK medical students towards the use of a stand-alone TBL session to deliver blood transfusion training.

Methodology:
A single TBL session in blood transfusion, mapped to the Keele undergraduate curriculum and requirements for graduating doctors as laid out by the General Medical Council, was designed by a multi-disciplinary team as per AMEE guidance. The session consisted of specific pre-course reading, readiness assurance testing (RAT) and team-applied scenarios (tAPP). RAT consisted of single best answer multiple-choice questions (MCQ) to test understanding of pre-course learning material. RAT is undertaken individually (iRAT) and then repeated as a team (tRAT) in combination with immediate feedback scratch cards and discussion with a content expert. Case-based tAPP also involving MCQs were designed to assess application of knowledge.

Data was collected prospectively to include mean iRAT and tRAT scores. Post-session evaluation asked students to rate the teaching session using a 5-point Likert scale in addition to providing free-text responses exploring what worked well and how the session could be improved.

The mean iRAT and tRAT scores were analysed using a one-tailed two-sample t-test. Free-text responses were thematically analysed using standard qualitative methods.

Results:
55 senior medical students (36 final year and 19 fourth year medical students) took part in 4 TBL sessions between September 2016 and January 2017. Mean session duration was 210 minutes (180-240). Knowledge assessment through RAT showed tRAT scores were significantly higher than iRAT scores (6.6 vs 5.4, t(6) = -2.11); implying student participation in the TBL process enhanced new learning in blood transfusion. Student evaluation of the TBL sessions was globally positive. Modal Likert-scale response was 4 for pre-reading material, post RAT ‘lecture’ and tAPP case-based discussion.

Qualitative analysis of the free-text responses suggests that students valued the interactivity provided by TBL. Students also valued how TBL provides a clear structure for delivering a large volume of information with variation, to ensure focus is not lost.

Discussion:
TBL is a successful methodology to deliver blood-transfusion training to UK undergraduate medical students, even when they have no prior knowledge of this technique. TBL can be effectively utilised within a single teaching session. A session duration of at least 180 minutes is required and there is significant time required for session setup/design.

Our pilot data shows significant increase in RAT scores (assessment of knowledge) when working as a team compared to individual performance; supporting successful application of TBL to knowledge acquisition. Student evaluation demonstrated the session was well received, with students valuing the organisation and interactivity TBL provides.

This pilot TBL study demonstrates the potential utility of individual TBL sessions within undergraduate transfusion training and paves the way for further evaluation into student experiences in TBL and to explore the longer-term impact on student learning.

References:

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4. Livingston, B., Lundy, M. & Harrington, S., 2014, Physical therapy students’ perceptions of team-based learning in gross anatomy using the Team-Based Learning Student Assessment Instrument, J Educ Eval Health Prof, 11:1


Preparing and supporting tomorrow’s doctors to address obesity through behaviour change in primary care: translating academic learning into clinical behaviour

A Wylie
King's College London

Background:
Dietary factors are overtaking smoking at the leading contributor to all-cause morbidity, however educational approaches to support medical students to address obesity remain relatively undeveloped, relying on ‘ad hoc’ bedside teaching from clinicians, who may not be aware of current advances in behaviour change theory, or out-of-context ‘training’ approaches, where barriers such as the clinical and social context, embarrassment at broaching, or suboptimal role modelling are not addressed. There is an increasing body of evidence to support brief intervention and motivational interviewing techniques in addressing obesity within primary care (1, 2)

We present an approach which has been implemented and iteratively evaluated and improved at two large European medical schools, King's College London (KCL) and Aristotle University of Thessaloniki (AUTH), supporting students in applying and reflecting on their performance in clinical contexts.

Methodology:
All final year medical students attended teaching (lecture and role play) on clinical approaches to obesity, practical applications of behaviour change theory, with resources to support patients’ weight-loss, nutrition and exercise. Students were then required to broach and discuss obesity with patients during an eight week placement in primary care, agreeing a goal and action plan where appropriate, and reflecting on their experience through a compulsory but formative 500 word essay which was discussed with their GP tutor. The approach at AUTH was seeded from the KCL experience (3) but adapted so that students approached 10 patients rather than one. The sampling strategy at KCL involved 30 randomly selected essays from approximately 115 in each of three rotations across three years, with outlying views purposefully explored. At AUTH a similar sampling strategy was used for three rotations across one academic year, however analysis was stopped once saturation was achieved at approximately 12 essays, confirmed by exploring a total of 20 essays in each rotation. Essays were double coded and at KCL triangulated with other data sources such as evaluation data and focus groups.

Results:
Analysis of reflective essays across consecutive placements revealed insights into
- Students’ attitudes to patients and insights into obesogenic contexts,
- Barriers and facilitators to effective practice, such as time, privacy, patient priorities and rapport
- The student and patient experience, and
- On-going student learning needs relating to attitudes, knowledge or skills.

Discussion:
Students expressed changes to their professional role identity, incorporating concepts of health promotion and patient centred approaches to communication. Students at KCL, who approached a single patient, were more likely to express difficulty broaching and despondency at patients who were not ready to change, whereas students at AUTH were able to reflect and build on multiple experiences. Students in later rotations were less likely to cite barriers and more likely to cite their GP tutor as a source of support, suggesting the new curriculum was becoming effectively embedded and that GP tutors benefitted from cumulative ‘trickle-up’ learning from their students.

Conclusion
In order to incorporate health promotion with respect to obesity and nutrition into their future role as doctors, students need more than the right knowledge and skills: they need opportunities to embed their learning through multiple clinical experiences with opportunities to formally reflect on practice. Our research demonstrates that this approach is helpful for students and can be enabling for GP teachers. The challenges of ensuring medical students see, learn and practise these techniques with competent teachers are being acknowledged and addressed.

References:
Prescribing high risk medicines: Low fidelity simulation improves final year medical students’ confidence and competence
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New Cross Hospital, Wolverhampton Road, Wolverhampton, WV10 0QP

Background:
Prescription error rates are highest among junior doctors, yet this cohort perform the majority of prescribing in the National Health Service. (1) The General Medical Council outlines the need for medical graduates to “prescribe drugs safely, effectively and economically”. (2) However, prescribing errors constituted 32% of medication incidents, reported to the National Patient Safety Agency, which resulted in serious harm or death. (3) Approximately 9% of inpatient medication orders contain errors (1) with “wrong/unclear dose, strength or frequency” cited as the principal issue in acute care settings. (3) Medicines associated with the highest error rates include analgesics and antibacterials. (1) High risk medicines, such as cardiovascular drugs, antimicrobials, opioids and anticoagulants/antiplatelets, account for the majority of medication incidents resulting in severe harm or death. (3) A local focus group of Foundation Year 1 (F1) doctors demonstrated variable undergraduate prescribing experience, which often consisted of ad hoc teaching with junior doctors. All participants expressed significant “day one, F1” anxiety about prescribing medicines such as intravenous fluids, antibiotics and warfarin along with a desire to “be a bit more sure” when prescribing.

There is a clear need for formal undergraduate prescribing education to improve the confidence of our future doctors and minimise the risk of prescribing errors, thereby safeguarding patients from iatrogenic harm. (1)

Methodology:
A programme of low fidelity simulation of high risk medicines prescribing was developed and delivered to sixteen final year medical students during their first semester. Across ten hours of dedicated prescribing, students were faced with a variety of prescribing tasks using commonly encountered clinical scenarios as a vehicle for learning. Students’ competence levels during and on completion of the course were assessed through teacher observation. A questionnaire was used to establish the perceived benefits of the programme and its impact on students’ prescribing confidence.

Results:
By completion of the programme, all students demonstrated improved competence in writing clear and safe prescriptions. 100% of students reported greater confidence with prescribing. Qualitative responses reflected perceived value in specific prescribing teaching delivered in a case-based, clinically-orientated format with the opportunity to prescribe on drug charts. Further analysis and results from the second semester will be presented.

Discussion:
Junior doctors are responsible for the majority of prescribing errors, which may result in significant patient harm. (1) F1 doctors report low confidence levels with completing a safe and effective prescription, which may be attributed to inadequate formal training in this domain. During the clinical years, most learning occurs on placement; the nature of locally organised education programmes dictates a potential variability in students’ prescribing experience.

This low fidelity simulated prescribing course has improved final year medical students’ prescribing confidence and competence through exposure to realistic scenarios involving high risk medicines which may not have otherwise been encountered. This reinforces the utility of a formal education programme simulating prescribing of high risk medicines with the aim of reducing medication errors, thereby improving patient safety.

References:

Ref: 206, Board: J7
Quality Improvement Projects in general practice for senior medical students – exploring gains and challenges with regard to feasibility and sustainability.
A Wylie, K Leedham-Green
King's College London

Background:
Arguably, systems and processes have become the limiting factor to effective clinical practice, rather than knowledge and evidence, which are now relatively easy to access online. To build a workforce that is capable of running an effective service, audit is being replaced by Quality Improvement Project (QIPs) in clinical practice and specialist training in the UK. Consequently King’s College London (KCL), as part of its ongoing curriculum redesign, developed a QIP module for all 4th year medical students. Approximately 10% of these are being conducted in primary care, aiming to increase this proportion if well evaluated by students and acceptable to teaching practices. Nine GP teaching practices were invited to provide placements for 39 students to conduct nine QIPs aiming to support students in gaining the skills and experiences to improve a procedure, protocol or service for patient benefit, following a structured QIP process, using evidence and data critically, applying improvement science methods, and reporting findings.

Methodology:
Building on experiences from a smaller pilot in 2015-16, each practice was actively monitored to ensure the seven month project timeline was being met; projects, plans and data generation strategies were agreed; links with online learning and methodological requirements were made; and student and supervisor concerns were elicited and addressed. Educational outcomes are being evaluated through analysis of student presentations and QIP write-ups, thematic analysis of reflective accounts of the project, anonymised course evaluation, and participant focus groups.

Results:
The full data will be ready for analysis in April but early results indicate:
- Practices felt well briefed and able to access the online resources and details;
- Students were active participants in agreeing the subject for their projects with their GP Teachers (GPTs) and in developing plans to enact change at the practice;
- Some confusion arose about how many complete PDSA (plan, do, study, act) cycles were needed if any, and how projects would be assessed and credits awarded as both group work and individual work;
- Following a mid-point review process in December, students were spending much more time that the originally allocated session/week on their QIPs and the demands on GPT supervisors was higher than anticipated.

Discussion:
A new and ambitious module for both teachers and students, albeit relevant to modern clinical practice, presents implementation challenges such as feasibility and acceptability, as well as rapid and possibly unrealistic learning curves for busy clinicians and students. Concerns about curriculum time, group working, assessment parity and the overall weighting of the module are balanced against the value of experiential learning, possibility for publications, and preparation for QIPs in clinical training.

Conclusions
Close monitoring and a constant process of revision and improvement needs to be built into new modules, however once the programme embeds itself, we expect acceptability of assessment methods, and feasibility of projects within the timeframe, to improve. Students that are embedded in experiential and work-place based learning stand to build a range of interpersonal skills as well as both tacit and explicit systems-based knowledge, and there are potential secondary benefits of QIPs to the supervisors’ clinical setting and to the quality of patient care.

References:

Ref: 269, Board: J8
Re-evaluating the National Student Association of Medical Research
RM Lundin, M Byrne, H Jackson, A Mathur, B Cross, E Christopher, L Isaacs, S Banh, Z Sheng
National Student Association of Medical Research

Background:
The National Student Association of Medical Research (NSAMR) is a non-profit primarily funded by the Wellcome Trust to foster medical research amongst medical students in the UK. The organisation was founded in 2012 to coordinate medical student research societies at UK medical schools and activities were most recently evaluated by the founding committee in 2014.
NSAMR currently has 28 student societies affiliated and ongoing activities have included an annual, national research conference for medical students, a national mentoring scheme and an outreach programme to support students applying for medicine.
The Association underwent a restructure in 2016 to allow for increased activities, schemes and research opportunities. All NSAMR activities are completely free to all students and open to all and the organisation is completely managed by medical students. This is the first time the organisation has been re-evaluated with the new structure and activities.

Methodology:
The organisation registered with the Charity Commission in 2016 and created individual teams for each area of activity. New teams included Journal, Research, Events and IT and a 5-year development plan was created for each area. Additional resources and support was made available to each of the 28 affiliated societies and participation at external conferences and events was increased to develop new partnerships and improve the organisational branding.

Results:
The executive committee was extended from 5 members to 9, encompassing the chair and one lead for each team. Additional team members were recruited through a national recruitment campaign where 30 committee members are involved across the 8 teams.
An academic domain, nsamr.ac.uk, was obtained and the organisation has started to offer each society a free website and domain on networked sites. So far, 8 societies have moved their websites to NSAMR which offers free, unlimited hosting for the duration of the affiliation. Each society and committee member have also been provided a new @nsamr.ac.uk email address and 30GB of online storage.
The first new research activity was a series of taster sessions for medical students in early years to experience a half-day session with an established research team. 63 research groups from 19 universities and 145 medical students from 22 medical schools took part over the month the taster sessions were running. The research team have also introduced a new online database with research projects running from small duration to summer projects. The NSAMR Journal is due to be launched in February 2017 and has recruited 229 Peer Reviewers, 33 Section Editors and 7 Executive Editors, and has local representation at all 35 UK medical schools. The focus is purely educational where training modules are currently being developed to support the student reviewers. The journal will be open access, free-to-publish and online-only.
The NSAMR mentoring scheme has been updated where students paired up with senior academics includes a specific research project to be completed. Resources have also been developed to support the mentors and 7 pilot sites are currently running projects under the new mentoring scheme.
A series of new online lectures and a national, online journal club is also underway to add activities that the affiliated societies can easily get involved with.

Discussion:
The new structure and involvement of more than 30 students on a national level has significantly increased the level of activity within the organisation. While NSAMR has previously had to rely on the affiliated societies to undertake most of the work associated with the national schemes, NSAMR is now able to run projects like the taster days internally, making it possible for the affiliated societies to take part in activities and events without having to commit a large amount of manpower and time.
Plans are currently underway to develop a similar organisation for trainees.

References:

Ref: 215, Board: J9
Seeing is believing: visual impairment through simulation
M Elsaddig, C Ashton, O Gokhale, K, Jones
Swindon Academy, University of Bristol

Background:
Close to 2 million of the UK’s population has sight loss. Given low vision’s close link to ageing, of those 2 million, 1.6 million are aged over 65 years (1). With the increasingly ageing population (2), encountering such patients is becoming a regular occurrence. As well as the impact on activities of daily living and social interactions, low vision can impact on activities such as hospital navigation or medicines management (3).
Multiple studies and intervention have considered medical students’ and doctors’ attitude change towards ageing (4) yet not many address the issue of low vision in the aged patient. The aim of this study is to implement and evaluate an interactive session about visual impairment in the elderly to change attitudes towards those patients.

Methodology:
We created three visual impairment goggles simulating glaucoma, macular degeneration and homonymous hemianopia. Prior to the session, students completed a modified UCLA geriatrics attitude scale (5) of their views towards ageing and visual impairment. Initially students wore the goggles and ratings on the level of visual symptoms were compared to textbook diagnoses. The students were then asked to complete several tasks including finding a number in a phone book, dialling the number, taking correct medications and reaching a certain destination within the hospital. These tasks were to be completed with and without the simulation goggles and time taken was recorded. They were asked to complete a second, post-session attitude scale. We also held a focus group with the students to discuss aspects that were perceived to be difficult and suggestions to overcome them.

Results:
The study is due to commence end of January 2017 therefore results are currently tentative. We will use Kendall rank correlation coefficient to assess the suitability of the goggles as simulators. Using the Wilcoxon rank test, the pre- and post- session attitudes will be compared. We will use thematic analysis for the focus group discussions.

Discussion:
We hope to demonstrate that it is possible to simulate visual impairment in a low-cost yet reasonable fidelity method. We anticipate that the teaching session not only demonstrates changes in attitude towards the visually impaired but also allow students to consider solution. We hope that this becomes a regular session within the geriatric medicine curriculum.

References:
1. Age UK, RNIB. Improving later life for people with sight loss. 2015.
Should Sim Man die? Final year medical students' beliefs and attitudes regarding death in simulation
L Evans, J Hartland
Swindon Academy, Great Western Hospital

Background:
The GMC lists caring for dying patients and dealing with the practicalities of death as an essential outcome for medical graduates but there is no educational consensus whether sim man should die in undergraduate simulation (1). Concerns include being too distressing or distracting from other learning objectives. There is specifically a lack of research regarding medical students’ own beliefs and attitudes towards sim man dying. The purpose of this study was to assess whether final year medical students felt it was acceptable for sim man to die and to gain insight into their attitudes and beliefs regarding simulation and death.

Methodology:
A paper questionnaire was distributed to final year medical students on placement at Swindon Academy in December 2016. The first part of the survey included quantitative dichotomous questions with white space for students’ comments. The second part of the questionnaire involved a series of statements relating to death and simulation. Students were asked whether they agreed or disagreed with each statement. For all questions participants were able to select an ‘unsure’ option. All responses were inputted into an electronic database for further analysis. The free text comments regarding concerns and benefits from sim man dying were analysed using thematic analysis and coding.

Results:
A total of 34 out of 35 students completed the questionnaire. 97% of final year students felt they should have end of life simulation scenarios. 88% of final year students felt that sim man should be allowed to die in acute scenarios. 68% felt sim man should die if they made a fatal error is made during a simulation. 94% said there were benefits of sim man dying during simulations. The four themes within this included preparing to deal with death; experiencing death in a safe environment; realism of simulation and practicalities/skills regarding death.
27% of final year students had some concerns about sim man dying. The three main themes were emotional distress; feeling underprepared and negatively impacting on confidence.

Discussion:
The majority of final year medical students feel that sim man should be allowed to die in both end of life and acute simulations. Although they perceive many benefits they have important concerns that must be considered. This cohort of medical students did not experience sim man dying during their placement and therefore may underestimate the impact on them. Educators should avoid taking a paternalistic approach by assuming sim man dying is too distressing for medical students and should consider utilising this as an undergraduate learning tool for dealing with death. The way medical students cope with death can be affected by the support of supervisor and debriefing opportunities (2). Simulation provides a safe, supportive environment with allocated time to debrief and discuss difficult issues.
A multi-disciplinary end of simulation day will be offered to final year medical students at Swindon Academy from January 2017. Further work includes analysing of the second part of the survey and extending this survey to the next cohort of final year students and also to clinicians involved in medical education.

References:

Ref: 235, Board: J11
Simulated Hospital @ Night: A out of hour simulation to aid the transition from medical student to junior doctor
C Tettey, S Tilson, P Ehilawa, T McGowan, C Sharratt, S Khin Htun, R Cullum, P Alsopp
Queen's Medical Centre, Nottingham University Hospitals NHS Trust, Nottingham, UK

Background:
Out of hours oncall work is often the first time that the newly qualified doctor is required to assess an unwell patient and make critical clinical decisions without immediate senior support. Although sound medical knowledge is the foundation of providing effective clinical care to these patients, non-technical skills (NTS) such as communication, team-working and analytical skills play an equally important role and are often implicated when adverse outcomes occur[1]. Despite increased attention on the role and importance of NTS amongst healthcare professionals in recent years, there are few dedicated opportunities to develop them in the undergraduate medical curriculum. This is reflected in the anxiety recent medical graduates feel when approaching the transition from student to junior doctor[2]. Simulation training is increasingly used in NTS development, allowing participants to explore prompt prioritisation, effective communication and independent decision making in a safe, controlled and reproducible environment with opportunities for debrief and reflection[3]. Our simulation effectively replicates a typical hospital night shift for a Foundation Year 1 (F1) doctor in a large acute hospital which is reproducible, and with novel concepts to improve fidelity.

Methodology:
Final year medical students at the University of Nottingham were invited to take part in a simulated ‘Hospital@Night’ night shift aimed at recreating common challenges F1 doctors are faced with when oncall. Students were divided into teams, briefed at ‘handover’ then given a list of jobs to prioritise and divide amongst team members before performing clinical tasks and assessing simulated patients on three ‘wards’, which were geographically isolated areas. Each ward contained an average of seven patients, with simulated patients and faculty playing a number of roles. Mobile phones were used to simulate pagers, with students receiving interruptions from a faculty member playing various roles including ward nurse, clinical chemistry technician and radiologist oncall. After the session, a faculty-led debrief was held and key clinical ‘pears’ of information were relayed depending on performance. The design group included higher trainees in medicine, emergency medicine and surgery, teaching and simulation fellows and F1 doctors. Before and after the session, students were asked to describe key tasks and skills required on an out-of-hours shift and rate their confidence post simulation using a Likert scale. The simulation has been successfully run three times, with an increased throughput of students on each occasion.

Results:
Thirty one students took part in the most recent simulation. All students agreed that the simulation improved their insight into the challenges of a night shift and that they felt better prepared for F1 as a result. The vast majority (92%) found the simulation stressful and two-thirds of students felt it was realistic. Prioritisation, multitasking and maintaining a systematic approach when reviewing patients were common themes encountered in free-text feedback.

Discussion:
We have found that a simulated night shift is beneficial to final year medical students, albeit resource and faculty heavy. The novel concepts of moving between wards, use of mobile phones and simulated patients increases fidelity, resulting in a more realistic learning experience. It is well suited to teaching key the non-technical skills new doctors require and helps prepare students for a potentially stressful aspect of their F1 year. We will be incorporating it into our local final year course, and believe that the principles are reproducible and can be extended for use in other forms of simulation training.

References:

Ref: 453, Board: J12
Simulation and Situational Judgment Test (SJT). How does theory compare to reality?
D Murphy, N Gill, A Coombs, T Reynolds, J Morgan
North Bristol Academy

Background:
Situational Judgement Tests (SJT’s) were introduced into the application process for the foundation year programme in 2012. They assess aptitude to a variety of domains including; ethical decision making, attitude to teamwork, communication and commitment to professionalism. This process is seen as a way of predicting likely professional behaviour as a year one foundation doctor (1). This project set out to discover whether judgment with regards to these situations changes within a clinical setting. SJT style questions were compared with “real life” examples in a simulation suite.

Methodology:
This observational study took place in a simulation suite based in North Bristol Academy. The simulation was set up to mirror that of a ward environment. Students completed a pre-session SJT, assessing: (i) teamwork (ii) challenging hierarchy (iii) prioritisation of tasks (iv) communication skills (v) integrity and (vi) professionalism. They then took part in a simulation session, each consisting of four students, four student actors and two staff members acting as a consultant and a nurse. The simulation was run as a ward round with the consultant as lead and each student acting as a foundation year 1 doctor. Each session had four separate scenarios running concurrently. The themes tested by the SJT’s were integrated into these scenarios. A total of 41 final year medical students took part over the course of 10 weeks.

Results:
Results of the project were pending at the time of abstract submission. Quantitative statistics will be used to rank the pre-session SJT answers and these will be compared with “real life” events using one way t-testing.

Discussion:
We expect to find that the majority of the students answered the SJT questions correctly and that there was no difference between the SJT questions and the simulation with regards to ethical decisions and professionalism. We do however expect to find a statistical difference in prioritisation of tasks and communication.

References:

Ref: 363, Board: J13
SOS – a simulated on-call for medical students
J Hawkins, A Wilson, P Davidson
Surrey and Sussex Healthcare NHS Trust

Background:
At East Surrey Hospital, we have created the SOS course for final year medical students. This stands for Simulated On-call at Surrey and Sussex. It is an opportunity for final year medical students to experience the challenges of an F1 on-call but in a safe and supported environment. We aim to help medical students feel more prepared, particularly in prescribing and acute care; the areas it has been found that medical students lack in confidence(1). Evidence shows that when students have learning experiences in real life environments, similar to what they will encounter in their career, they develop professional confidence when the learning experience is in the presence of a professional mentor(2). This is what we aim to provide.
During the SOS course, our students have the opportunity to experience a ward cover on-call. They are faced with common F1 scenarios; experience the bleeps, the importance of communication on the phone, have plenty of prescribing practice and have to think about documentation and prioritisation.

Methodology:
We surveyed our candidates prior to their participation in the course and after they had completed the course. We asked how prepared the students feel for being on call as an F1, what sort of jobs they expect they might get calls about, how confident they feel about prioritising and managing sick patients.
The actual on call session lasts 60 minutes with 15 minutes prep at the beginning and 15 minutes feedback and debrief at the end. There is a strict bleeping schedule that facilitators adhere to; each student is bleeped with 10 jobs over the 60 minutes. Whilst attending jobs, they will be receiving bleeps for jobs on other designated wards and they must prioritise.
There are mocked up sets of laminated notes, continuation sheets, laminated drug charts and guidelines in clearly labelled folders on the wards near to a facilitator. The students are given a double-sided handout at the beginning of the session with ‘phone calls’ on one side and ‘plans’ on the other. The idea is to start thinking about how best to document phone calls whilst on call and the importance of good/clear documentation. The ‘plan’ side enabled a thorough debrief.
Scenarios
At East Surrey, we have developed 10:
1. Prescribing warfarin
2. Management of hyperkalaemia
3. Management of hypoglycaemia
4. Prescribe an anti-emetic
5. Prescribe fluids for a patient who is nil by mouth
6. ABCDE (acute asthma)
7. Prescribe analgesia
8. Review a chest XR after NG tube placement
9. Prescribe antibiotics for aspiration pneumonia (penicillin allergy)
10. Prescribe regular meds for a post-op patient and advise re: sliding scale

Results:
The results from our questionnaires are very positive. 100% of students felt that SOS improved their confidence about their first medical on-call with 50% saying they were much more confident. 100% replied that it improved their understanding of the expectations of an F1 on-call. Moreover, 100% of students said they felt it improved their abilities to prioritise; one of the key aim of the course. Over 90% stated they felt more able to receive an effective handover over the phone. 100% felt that this course was relevant to their education, would recommend it to other students and would do it again. Over 80% of students felt that this course should be a compulsory aspect to the final year curriculum at their medical school.

Discussion:
The SOS course has introduced the dreaded F1 ward cover on-call in a safe and supervised environment. It has helped our student know what to expect, which jobs to prioritise, how to answer a phone call and which questions
to ask to enable them to prioritise the tasks in a suitable order. It has also given lots of prescribing practice. It has made our students understand the importance of diligent note-taking whilst on call and the importance of a jobs list. We are hoping to introduce this course across the region.

References:

Ref: 140, Board: J14
Student Perceptions of Course Evaluation – A Mixed Methods Study
P Harrison, D Wilson
Cardiff University School of Medicine

Background:
With course evaluation being a mainstay of any education program for a number of local and national factors, it remains important to understand the student perception of these processes. Having recently undertaken a significant change in curriculum students of the two curricula within Cardiff University School of Medicine have been subject to differing experiences of course evaluation. This study aims to assess student perception on the purpose and the manner in which course evaluation has been conducted, whilst assessing the extent to which the feedback loop is closed. The unique context of this study will allow the exploration of views of students within the two medical school curricula in order to discover whether there are any consistent themes in the perception of course evaluation between Year 4 students – the last cohort of the old curriculum – and Year 3 students – the first year of the new curriculum

Methodology:
Using current Year 3 and Year 4 student volunteers, focus groups were used as a means of collecting data – providing the qualitative arm of the study. Trigger questions were devised to serve as the agenda for the discussion, to maintain consistency between the sessions and to serve as the basis for coding (1, 2). The focus group transcripts were independently transcribed and subjected to thematic analysis using NVIVO 10. Thematic analysis was chosen in this study due to its’ ease in identifying, analysing and reporting themes within the data set (3). Themes that arose during these focus groups were then used to devise a questionnaire released to all Year 3 and Year 4 students via Bristol Online Survey. This online questionnaire acted as the quantitative arm of the study – and aimed to maximise the data set and explore issues that had arisen during the focus groups, to discover whether the opinions and themes that arose were continuous within the entire cohort. Containing a mix of both open and closed questions, the questionnaire aimed to be simple and quick to complete for students, whilst open questions allows a freedom in the response (4).

Results:
Two focus groups were set up, one containing Year 3 students (n=5), and one containing Year 4 students (n=4). There were 139 respondents to the online questionnaire - 91 3rd year and 48 4th year students, representing a response rate of 22.9% overall 30.5% and 15.6% respectively. The majority of questionnaire respondents (77%) saw the purpose of evaluation as ‘Improving the Course for Next Year’, consistent with the views of the focus groups. Students had mixed feelings with words like ‘excessive’, ‘tedious’, ‘never-ending’ being used to describe the surveys. Students felt that the loop was not closed (102/139 respondents), and suggested various improvements.

Discussion:
This study is the first within undergraduate medical education that takes a qualitative and quantitative approach to the student perceptions of course evaluation processes. These results are important to course designers in order to develop a student-centered evaluation process, to ultimately achieve a greater quality and quantity of feedback, whilst also increasing student satisfaction. Students within both curricula felt that feedback only impacts future cohorts of students, and found it to be of no personal benefit. Overall, students felt that their feedback was often not listened to and acted upon, or that changes made due to student feedback were not communicated to them, indicating that the feedback loop was not closed and needs improvements. Students recognised the importance of evaluation, but overall had mixed feelings towards it, including an underlying ‘survey fatigue’. Suggested improvements to the evaluation process include, a short mid-block evaluation, better communication to students via email regarding changes made to the course, and a more open dialogue between University and students regarding student feedback and course improvement.

References:
Students’ priorities in medical training – are these values what we expect them to be?

N Storrar, D Hope, HS Cameron
Centre for Medical Education

Background:
Medical education has many stakeholders, and despite being at the heart of the process students are often deprioritised when setting educational objectives (1). Understanding the diversity of student views on what is important in their medical school training is essential to redressing this imbalance. Students’ priorities are not necessarily what we expect them to be - a huge proportion of knowledge transfer is invisible and unintended: students are taught as much by the “hidden curriculum” as the official one. (2,3) Given this, what do students think matters most in their medical school, and how can learning about this help us prepare them to become doctors? Furthermore, there are increasing efforts to ensure the medical profession is representative of the general population. Given the efforts to promote inclusion of underrepresented groups (4) we must be aware of how the culture and experience of medical study may differ depending on student background, so as to ensure fairness in teaching and assessment. This study explores what a range of students think of the culture of their medical school and how it influences their learning.

Methodology:
Using a grounded theory approach we interviewed students at a UK medical school on the subject of medical school culture and learning. Qualitative data was key to providing a nuanced understanding of the varied and perhaps surprising perspectives that students had on the purpose of their education. We targeted a broad range of student backgrounds to build a more diverse understanding of student views. All students were interviewed individually and with appropriate confidentiality procedures.

Results:
We report on what students value most in their medical school and analyse the range and diversity of views. We discuss the extent to which student perspectives vary with background and why. Relevant (anonymised) examples of the way students discuss priorities are used to illustrate the findings.

Discussion:
Student views on medical school culture and learning are influenced by a range of factors beyond the official curriculum and teaching materials. Many well intentioned educational interventions may be unsuccessful because they do not consider these unknown factors, or they assume all students will respond in the same way. By understanding what students think about their medical school and its culture, schools can better plan interventions, ensure inclusivity in teaching and learning, and identify otherwise unknown problems. This is particularly important when making strategic decisions about preparation for practice – are the values in medical school appropriate for postgraduate practice? Further work should consider how staff and student views on these issues align or diverge, and why.

References:

Ref: 223, Board: K1
Supporting Research skills development for medical students
M Elsaddig, C Yu, N Yau, K Jones
Swindon Academy, University of Bristol

Background:
Evidence based medicine is ‘the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients’ achieved by ‘integrating individual clinical expertise with the best available external clinical evidence from systematic research’. (1) This has been a cornerstone in modern medical education and practice and as such, it is essential that medical students obtain the skills for effective critical appraisal. This reflects the GMC’s guidance on expected outcomes for graduates. (2) Research has identified that education in critical appraisal at the undergraduate level is more effective than later in their career (3). However, students feel unprepared to be involved with research or critical appraisal (4).

We aim to determine the impact of combination of a research skills workshop and regular critical appraisal skills practice on medical students.

Methodology:
Third year medical students were surveyed for their understanding regarding critical appraisal, research types, levels of evidence and literature searching prior to the workshop to gain assess their entry level knowledge. We then delivered a half day workshop as an interactive environment, with a mix of tutorial and problem-based learning covering basics of research skills, reading scientific papers and appraising them. The students were then asked to examine an abstract and write a critical appraisal. Following this, the students’ confidence and understanding was surveyed again following the workshop to determine the efficacy of the intervention.

During their attachments at Great Western Hospitals Foundation NHS Trust the students were allocated a topical scientific paper and asked to present a succinct critical appraisal to their peers in a peer-assisted learning environment. This included the clinical significance of the paper and its portrayal in the news in seven minutes during a once weekly meeting over the period of 18 weeks attachment. Students received feedback from teaching fellows and their peers. Where interesting debate generated, students collaborated to produce a letter of response to the editor of the journal.

Following the interventions above, students were asked to examine at the appraisals they wrote following the first workshop and we asked to consider if they would make any changes. They were asked to produce reflection on their experience.

Results:
The workshops and sessions are due to commence in February. At the time of writing this abstract data collection and analysis are incomplete and the results are therefore tentative. We will use descriptive statistics to assess the confidence pre-and post- workshop. The students’ reflections will be analysed thematically.

Discussion:
We hope such intervention is sufficient to develop students’ skills in critical appraisal. We also hope students gain further practice and utilise skills gained by publication of collaborative letters to the editor. Following on from this, we hope to offer this teaching intervention to subsequent cohorts of students at other academies.

References:
The Experiences of Foundation Doctors with Dyspraxia: An Interpretive Phenomenological Study
E Walker, S Shaw, J Price, J Anderson
Brighton and Sussex Medical School

Background:
Dyspraxia may be defined as “the inability to plan, organise and co-ordinate movement. It results in fine and gross motor problems and/or speech difficulties” and has a similar prevalence to dyslexia in the UK general population, at 6-10% (1). However, although there is now growing evidence regarding the difficulties experienced by and support needed for medical students and doctors with dyslexia (2-4), there is no current research focusing on the effects of dyspraxia on Foundation Doctors (FDs) in their undergraduate training. This study will focus on the experiences of these individuals.

Methodology:
This was an interpretive phenomenological study. Foundation Schools in the South of England were contacted, inviting FDs with dyspraxia to come forward and take part in loosely structured interviews. All interviews were transcribed verbatim and then underwent a general thematic analysis.

Results:
We report the emergent themes from the interviews. This paper presents the lived experiences of FDs and how they have coped with their dyspraxia. It also discusses their feelings concerning its effects on future career decisions within medicine.

Discussion:
The findings of this study are revelatory and accelerate the need for further evaluation of the support available for dyspraxic students within medical education. We acknowledge that further study will be needed to quantify the findings of this qualitative study.

References:
The National Student Association of Medical Research (NSAMR) Publication Pathway
RM Lundin, M Byrne, H Jackson, A Sinha, G Tong, C Grafton-Clarke, S Rees, A Mathur, B Cross, E Christopher, L Isaacs, S Banh, Z Sheng
National Student Association of Medical Research

Background:
Research experience has become increasingly important for medical students. However, medical students receive little to no training on how to publish or on open access publishing, and face many barriers to gaining that experience as there is no formal training pathway for students to follow.

Methodology:
In 2016, the National Student Association of Medical Research (NSAMR) created the NSAMR Publication Pathway. The Pathway consists of two components: educational modules in manuscript preparation, peer review, and editing; and a free to publish, open access journal, which is authored, reviewed, and edited by medical students.

Results:
NSAMR has now recruited 229 Peer Reviewers, 33 Section Editors and 7 Executive Editors, and has local representation at all 35 UK medical schools. The NSAMR Journal is supported by the Wellcome Trust. Furthermore, members of the NSAMR team have won national and international awards for their work. NSAMR is now in discussions with established medical journals and higher education institutions to gain accreditation for its education modules.

Discussion:
The NSAMR Publication Pathway fulfils a currently unmet need for students across the United Kingdom. It increases exposure and education pertaining to the publication process, and thus better prepares medical students for their medical career.

References:

Ref: 169, Board: K4
The use of male clinical teaching associates in medical education - who are we hiring?
J Taylor, K Jones
Swindon Academy

Background:
Although the presence of clinical teaching associates (CTA) as part of medical education in the UK has been steadily on the rise, at present there are few established male CTA programmes in the UK. CTAs are lay people who are trained to use their own bodies to teach medical students intimate patient examinations. This is a common-place method of teaching in the U.S.A and Australia, but we have been slow to establish the same in the UK(1).

At Swindon Academy, we have a successful female CTA programme for pelvic(2) and breast examination, and wanted to expand to include the male genital and digital rectal examination. In the United States, where the use of CTAs is common, the jobs are widely advertised for online as for other positions of employment. As this is a little-known job in the UK, we anticipated great difficulty in attracting interest to the programme. We liaised with existing teams in order to develop our advertising campaign, placing an advert on our trust website, and also on Grindr – a social networking application. The advertisement cascaded to several local and even national newspapers, generating an overwhelming amount of interest.

Methodology:
A database was collated containing the details of all gentlemen who contacted the programme lead, including their age, location, and any reasons stated for their interest. All men were invited to complete an application form, and all applicants were subsequently surveyed to find out where they had heard about the application, and their motivations for applying.

Results:
In total over 525 gentlemen contacted the programme lead with enquiries, with such interest that the initial open evening had to be postponed. They ranged in age from 19-68, with interest coming from across the world. Forty five gentlemen went on to make a formal application to the programme with backgrounds in healthcare, education, office based work and many more. Many cited personal health experience as a reason for applying. Thematic analysis of the surveys is currently being conducted to elicit further themes in motivation for application.

Discussion:
The UK is lagging behind our American and Australian counterparts in how we teach intimate examinations, with minimal use of male clinical teaching associates in medical schools. A potential barrier to this is the perceived difficulties in recruiting CTAs, but our experience shows that this is not the case. We should be encouraged from these results that public response to the advert was overwhelmingly positive, and we should consider introducing this training further across the UK.

References:
The Utility of Near Peer Bedside Teaching on Contextualisation of Pre-Clinical Knowledge and Confidence in a Clinical Environment: A Service Evaluation

M Mashar
University of Cambridge

Background:
Traditional medicine courses maintain a clear distinction between pre-clinical training, focusing on basic biomedical science, and clinical training. Only three universities in the UK have retained this style of course: Oxford University, the University of St Andrews and the University of Cambridge. Separating basic biomedical sciences and clinical knowledge has been shown to result in poor association and application of the knowledge (1). Near peer teaching schemes (NPTS) are utilised worldwide across several medical schools to different effects, with many investigating the teaching ability (2) and mentoring roles of senior medical students. The School of Clinical Medicine was running a pilot near peer teaching scheme of three bedside teaching sessions. Sessions involved 4 third year pre-clinical medical students being taught by 2 final year medical student tutors over a period of 6 months. Sessions involved focussed histories and examinations around conditions previously encountered in pre-clinical teaching. A service evaluation was conducted assessing the effectiveness of this teaching intervention in increasing the relevance of pre-clinical knowledge and confidence in a clinical setting for pre-clinical students and improving teaching skills for tutors.

Methodology:
Questionnaires were designed with questions based around Lickert scales and free-text questions. 24 third year pre-clinical students and 12 final year tutors participating in the scheme were sent online questionnaires before and after the intervention. 22 pre-clinical students and all 12 final year tutors completed questionnaires before and after. Anonymised student numbers were utilised to link responses. Statistical analysis was carried out using the Wilcoxon-signed rank test.

Results:
Following the intervention, students reported: being more comfortable approaching and speaking to a patient in a clinical setting (p0.01); increased understanding of the relevance of existing knowledge to clinical practice (p0.005) and what to consider when managing a patient (p0.001). Moreover, students reported being more eager to start the clinical course (p0.2) but did report being more confident answering student questions (p

Discussion:
Exposure to small amounts of bedside teaching can improve self-reported confidence in clinical settings and better contextualises existing knowledge. Hence one could argue a role for earlier bedside teaching in traditional curricula. Moreover, bedside teaching sessions significantly increased desire to start the clinical course. Given that certain studies have indicated the transition between pre-clinical and clinical training can be stressful (3) (4), particularly when adjusting to the ward environment; perhaps introducing small amounts of clinical contact, could facilitate this change. However, whether such teaching results in better application of knowledge during clinical training requires further study.

The teaching intervention did not appear to benefit tutors as significantly as previously reported (5) which may be a consequence of a small sample size, limited number of teaching sessions or inadequate training. Further studies are required using validated assessment tools to attempt to objectively demonstrate the above effects.

References:
Paper withdrawn
Using games based learning for medical students: child development
S scales, H Sherriff, R Maroo, W Tasker
Newcastle upon Tyne Hospitals NHS Foundation Trust

Background:
Teaching medical students about the stages of child development is testing. Previously use of rote learning, case based discussion and clinical examples have been implemented. Educational games have been identified as a novel way to encourage student learning, but also to build teamwork skills, problem solving skills and provides a ‘safe place to fail’ 1. Following on from an educational games workshop at ASME ASM 2016, the paediatric Teaching Fellows designed a board game for stage 5 medical students during their Child Health rotation.

Methodology:
A board game was designed to be played with the stage 5 medical students following an introductory lecture to childhood development stage. Prior to the session, the students rated their confidence in identifying the age of a child based on their developmental abilities. At the end of the session the students rated their confidence again. The confidence scales used a ten point Likert scale, and asked how confident the students were in performing a developmental assessment, identifying normal child development, identifying abnormal child development, classifying abnormal development, and identifying the new-born primitive reflexes.

The students then attended a community based Sure Start centre where they would be able to perform development assessments on normal children. Observation by the teaching fellows allowed for analysis of student skills and ability to elicit new-born reflexes. Finally the students completed a short quiz which included cases of abnormal child development.

Results:
74 stage 5 medical students participated in the sessions. Two students did not complete the post-session confidence scale. Overall there was an improvement in student confidence in all five domains following the session. The largest improvement was seen in the “classification of abnormal development” category.

Performing a development assessment and classification of abnormal development were the two categories the students scored lowest prior to the session (mean 3.81 and 3.15 respectively). Identification of normal development (mean 5.35), identification of abnormal development (mean 4.77) and identification of new-born reflexes (mean 5).

Following the initial session confidence ratings were: performing a development assessment (mean 6.44), identification of normal development (mean 7.07), identification of abnormal development (mean 6.79), classification of abnormal development (mean 6.08) and identification of new-born reflexes (mean 7.85).

During the session at the Sure Start centre, students were able to perform basic developmental assessments in children based on the previous seminar and game session. Most were able to identify a child with abnormal speech. The students were also able to identify normal new-born reflexes; however they were reluctant to perform these without prompting.

Discussion:
Child development is an important aspect of child health; however it is not an easy subject to teach. The use of a board game alongside a short seminar was able to improve student’s confidence in performing developmental assessments and recognise abnormalities. The initial seminar was able to provide most students with enough background knowledge to perform developmental assessments in the community.

Overall, use of developmental games alongside other resources has been successful in improving the ability of medical students to perform developmental assessments and recognise abnormalities.

References:
2. Gloucestershire Academy, University of Bristol (2016), Educational Games Workshop: The Journey from Traditional to Technological. ASME
Using Q-methodology to explore students’ beliefs about what makes a ‘good’ doctor and comparing outcomes with patients’ and doctors’ views.
J Coventry, A Bullock and J Hampton
Cardiff University

Background:
At the same time that our population is ageing and developing multiple co-morbidities, expectations of the healthcare system are increasing(1, 2). Although shared expectations are important, we do not currently know what different stakeholder groups believe makes a “good” doctor. This project aimed to explore students’ beliefs and compare these to the opinions of doctors and patients.

Methodology:
This phase of the study began in September 2016 and used Q-methodology(3) and a post-sort questionnaire to explore the views of students, sampled from years 4 and 5 at one medical school. A Q-set of 40 statements was created from focus groups and literature and used in an earlier phase with trainee doctors. The medical students used the same Q-set and sorted these into a forced quasi-normal distribution, ranking the 40 statements from most disagree to most agree. Each participant also completed a post-sort questionnaire explaining their reasoning for placing particular statements at the extreme ends of the distribution. Principal components analysis was used to distinguish groups of Q-sorts. Questionnaire responses informed the analysis. The student groups were compared to the analysis of 50 doctors’ Q-sorts. Patient perspectives were derived from the literature.

Results:
Patient beliefs consistently centre on holistic and patient-centred care in studies from around the world(4-6). They emphasise the importance of good communication and interpersonal qualities, over knowledge. In the Q-sort analysis, doctors also highlighted the importance of interpersonal skills alongside being a good teacher to both their students and patients. Specialty differences were found with those following a broad-based training programme giving less importance to depth of knowledge and being an expert. 28 students have completed the Q-sort exercise and initial analysis has identified two distinct groups. We will report on the characteristics of these groups following further analysis.

Discussion:
This work draws attention to the similarities and differences in views on what makes a ‘good’ doctor that are held both within and between groups of students, doctors and patients. It is important to consider opinions in the context of change within population demographics and undergraduate and postgraduate medical education. The results demonstrate shared belief in the value of ‘soft’, interpersonal skills. This chimes with changing focuses in medical education and developments such as the Broad Based Training programme(7). Future research using the same Q-set with patients would allow greater comparison and further understanding.

References:
7. Colleges AoMR. Curriculum for a broad based training programme; 2012.
Ward Round Simulation: A Novel Method for Teaching the Fundamental Skills of the ‘Medical Ward Round’ for Final Year Medical Students
H Patel, S Taylor, C Pascoe, A Nikjooy, M Khatoon, K Herregods, I Clark
Royal Wolverhampton NHS Trust

Background:
The ability of a clinician to conduct one’s own ward round is paramount in patient safety 1,2, however medical students receive little formal training on how to do so. Hence junior doctors may lack some of the necessary skills to carry out a safe ward round, which could directly impact upon patient safety. We therefore designed a three station ward round simulation, as a learning experience, identifying fifth year students’ understanding and abilities.

Methodology:
A simulation was designed testing abilities in observation charts review, notes documentation, drug prescription, prioritisation skills, communication with team members and safe review of medical inpatients. This was designed as a progressive ward round of increasing levels of responsibility. Pre and post-simulation questionnaires were administered to assess confidence levels in five key aspects of a medical ward round (Each scored from 1 – 5, 1: No confidence at all, 5: Very confident). Group debriefing, which took place post-simulation, subsequently discussed difficulties, identified learning points and provided a ward-round template.

Results:
21 students have taken part in the simulation thus far. Pre-simulation questionnaires revealed that despite having witnessed many ward rounds throughout their training, students had little confidence in performing one themselves. Significant variation in performance has been observed although no critical incident has arisen so far. All students valued the experience and we have seen an improvement in the mean overall confidence score from 1.9 in pre-simulation questionnaires, to 3.4 in post-simulation questionnaires. However, a quarter of students still felt they lacked confidence regards specifically conducting a ward round independently.

Discussion:
Improving confidence levels were reported by the majority of students, however it is yet to be demonstrated that this will improve competency in their future practice as junior doctors. Variability in performance could be attributed to lack of previous exposure or lack of engagement in clinical opportunities. Significant variation in delivery of ward rounds is also seen in clinical practice, which could have shaped students’ prior conceptions and knowledge. Our results thus far have indicated though that it is essential to incorporate ward round simulation into final year training, allowing students to learn fundamental skills in a safe environment without harm to patients3.

References:
1 Herring R, Desai T, Caldwell G. Quality and safety at the point of care: how long should a ward round take? Clin Med 2011; 11:20-2
2 Cohn A. Restore the prominence of the medical ward round. BMJ 2013; 347: f6451.

Ref: 454, Board: K10
What a difference a year makes: The use of near-peers in bedside teaching
K Warren, K Jones
Swindon Academy

Background:
Near-peer teaching is that delivered by someone “one or more years senior” to their students (1), and is an increasingly popular tool within the field of undergraduate medical education. Many benefits have been reported, including: the provision of a non-threatening learning environment, role modelling, and preparation of student-teachers for their future role in education (2, 3). Given the GMC’s stance on doctors as educationalists, starting this process early is likely to be beneficial (4). While near-peer teaching among medical students is not an entirely novel strategy, there is, as yet, no literature discussing its use in the clinical setting. Here, we aim to investigate the potential benefits of an innovative near-peer bedside teaching approach for undergraduate medical students.

Methodology:
Twenty second-year, “pre-clinical”, medical students from the University of Bristol attend Swindon Academy for four separate weeks as part of their Introduction to Clinical Skills (ICS) module. Bedside teaching delivered during these weeks provides the majority of these students with their first experience of hospital wards and meeting patients. This year we have trialled an innovative near-peer teaching approach, with third year medical students, based full-time in Swindon Academy for their first clinical placement, delivering the bedside teaching for their junior colleagues. Upon completion of the ICS module, we plan to survey both groups of students to ascertain their views on this novel teaching approach. Data will be collected using an online questionnaire, which will be voluntary, and all results anonymised.

Results:
While formal results are awaited, anecdotally both groups of students have responded positively to our teaching approach. Following full data collection, descriptive statistics will be presented. Thematic analysis will also be performed and results presented to reflect the students’ experience of, and views regarding, our near-peer teaching approach.

Discussion:
We hope to demonstrate a favourable response to our approach, from both the student and teacher perspective. As junior, clinical, medical students are delivering teaching to their pre-clinical colleagues, we anticipate that a significant benefit will come from role modelling in aiding the transition between pre-clinical and clinical undergraduate medicine.

References:

Ref: 213, Board: K11
What happens after death? The doctor’s responsibility
C Hill, C Hill, K Jones
Swindon Academy, Great Western Hospital Foundation Trust, Malborough Road, Swindon SN3 6BB

Background:
Timely completion of the Medical Certificate for Cause of Death (MCCD) is a legal obligation of the treating doctor with the information provided used in epidemiological and statistical studies which may impact upon allocation of healthcare resources (1). Delay or error in completion impacts upon the release of the body to the relatives can therefore cause significant psychological harm. Previous data on low-fidelity simulation for teaching death certification from the Swindon Academy demonstrates that it is well-received by medical students and increases confidence in death certificate completion. Ultimately, the responsibility of the MCCD is with the responsible consultant but realistically, it will be a junior member of staff completing the document.

Methodology:
A structured teaching session on death certification and cremation forms by the was organised for the 30 final year students placed at the Swindon Academy during their preparing for professional practice (PPP) module. The students were then split into 5 groups of 6 students and over the coming weeks took part in small group tutorials where they were asked to independently complete death certificates and cremation forms for simulated patients and state whether referral to the coroner was appropriate. After each simulated patient, the death certificates and cremation forms were collected and discussed within the group. Data on errors will be collected to assess for improvement. The death certificates were then given to members of the bereavement service for further evaluation of standard and validity. Self-assessment of confidence will be assessed on a 5 point Likert scale.

Results:
Data collection is ongoing.
Data will be collected on student confidence levels, errors in the certification and validity of the death certificate as assessed by the bereavement team.

Discussion:
A full discussion will be available after the results analysis.

References:
1. Guidance for Doctors Completing Medical Certificates of Cause of Death in England and Wales, Office for National Statistics, 2010

Ref: 391, Board: K12
What is the impact of students designing infographics on their own learning and that of their peers?

PSykes, I Swart-Wilson, A McDermott, M Brown, R Sheppeard, A Samuels & P Davies

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Background:
The demands on medical students to continually assimilate vast quantities of new information can be overwhelming, leading to stress or even burnout (1,2). Given that stress can be detrimental to student well-being and performance (3), any novel means of enabling effective student learning should be welcomed. Infographics are visual representations of information intended to be concise, clear and memorable. They are widely and effectively used in many communication industries including news, finance and politics. Their scope for application to medical education is considerable given 65% of the population are said to be visual learners (4). Furthermore, content is typically 6.5 more likely to be remembered after learning from infographics in comparison to text alone (5). Although the adoption of infographics within healthcare has begun (5), the impact of students producing their own and sharing them with peers is yet to be investigated. For this purpose, the University of Bristol’s Gloucester Academy has organised a novel competition among its students.

Methodology:
Phase 1: Running the competition
The competition, open to all students at the Academy, will run throughout the course of the academic year. Individuals have been encouraged to produce an infographic on an aspect of the medical school curriculum of their own choice. Entries will be reviewed and judged by clinical tutors with certificates being awarded to outstanding submissions based on content and design. All entries will be added to an online booklet, available for all students to use via the University of Bristol Intranet.

Phase 2: Assessing competition impact
Two different questionnaires will be disseminated each collecting both quantitative and qualitative data via Likert scale and free-text questions respectively. The first will be given to competition entrants focusing upon ease and practicality of designing infographics in addition to impact upon learning. The second will be administered to readers of the online booklet, addressing frequency of use, comparisons to alternative teaching methods and effects upon learning and understanding.

Results:
The infographic competition is currently accepting entries at the Gloucester Academy. Early competition entries are promising, showing clear, inventive and effective presentation of curriculum content. Full data collection and analysis, as well as examples of infographics, will be available for presentation at ASME.

Discussion:
Assisting medical students in their coverage of the vast medical curricula represents a significant challenge to educators (1,2). Infographics, with their proven appeal to visual learners (4), may provide a useful aid. Their adoption in various branches of healthcare has already been established (5) but no study has investigated the impact of student-created infographics upon learning. The results of this study will assess student interest and enthusiasm regarding their design and whether creating infographics can positively impact the learning of the authors and of their peers.

References:
2. Siddiqui IA, Adulrahman KAB, & Alsultan MA. A learning skills course for the 1st year medical students. Advances in Medical Education and Practice. 2015; 6: 205-10

Ref: 394, Board: K13
What is the value of longitudinal medical students’ placements in General Practice?

I L Ritchie, A Sood, M Keerig, E Anderson

University of Leicester

Background:
The vision for future healthcare delivery requires expansion of General Practice, however, despite the 2013 mandate for 50% of medical students to become General Practitioners (GPs), only 22.8% of 2015 graduates intended to follow this career route.1,2 The East Midlands and others parts of the UK have very low application rates for GP posts.3 Leicester Medical School launched a new curriculum in September 2016 to increase General Practice teaching from seven weeks to eleven weeks. The proportion of General Practice teaching on the course overall will increase from 8% to 25%.

This research explores medical student perspectives of the breadth of learning they are now experiencing from General Practice apprenticeship style placements to identify the benefits and challenges for the new curriculum.

Methodology:
This qualitative study compares the views of medical students on the new and old curriculum focussing on learning in General Practice Academies. It seeks to explore medical student knowledge, skills and attitudes and the impact of this learning for the practices and students’ future competence. Consented medical students complete semi-structured interviews to explore their insights and experiences. The data are analysed using thematic analysis using Nvivo software.

Results:
The interviews continue until May 2017 but early data (n= 19) identify mixed reactions to whether the General Practice placement should be extended in length. Overall the findings are positive with students reporting feeling more confident in their diagnostic ability and better prepared for practice when given a clinic to manage on their own. The main themes include; i) new learning - including students supported to run clinics; ii) a greater desire to take up General practice as a career pathway; iii) early challenges – including requests for more learning on dermatology and ENT. Generally there is little interest in remaining in the local East Midlands area post-qualification.

Discussion:
Outcomes identify that apprenticeship style General Practice training benefits medical students. Students perceive it prepares them for real clinical practice, especially when given the opportunity to practise their clinical skills with a wide range of diverse patients. The research is highlighting some challenges to be addressed.

References:
'The Acutely Unwell Child': a blended learning approach of innovative web-based virtual patient technology with traditional simulation

Aria, I J Clark
New Cross Hospital, Wolverhampton, West Midlands

Background:
Care of “The Acutely Unwell Child” is a key component in undergraduate paediatric education. In the West Midlands, didactic, classroom-based teaching predominates over learning in the acute setting. Outside of tertiary paediatric emergency departments, acute paediatric presentations may be encountered less frequently and involvement limited due to parental and societal concerns. However clinical exposure is often regarded as the best modality for learning (1). A focus group with paediatric and foundation trainees highlighted a lack of practical teaching on this topic and a desire for more interactive teaching methods. All participants reported nervousness, lack of confidence and perceived mistakes when managing their first acutely unwell child, attributed to their lack of previous clinical experience.

High-fidelity simulation in paediatrics is fast becoming a popular method of teaching for educators and students (2,3,4) with students praising the “safe learning environment” in which to achieve hands-on acute paediatric experience. In addition, web-based “virtual patients” and blended learning have been shown to enhance competence in basic life support and newborn examination in paediatrics (5,6).

Methodology:
A programme was devised consisting of web-based “virtual patient” experiences twinned with traditional high-fidelity simulation to determine the feasibility and efficacy of adopting a blended approach to enhance undergraduate acute paediatric teaching. Clinical reasoning skills will be assessed using a combination of assessor observation and student-led debrief. In addition, a pre/post-experience questionnaire will be completed by undergraduate paediatrics students assessing programme satisfaction and confidence in managing acutely unwell children.

Results:
Initial student beta testing of the web-based virtual patient module has been positive; students appreciated seeing the effects of their clinical decisions on the patient’s outcome in a safe learning environment. Following full implementation of the programme, assessor observation sheets alongside questionnaire results will be analysed and all results will be presented.

Discussion:
The focus group illustrated anxiety about clinical errors among undergraduates and foundation trainees due to a lack of exposure to acutely unwell children at undergraduate level. Simulation has been shown to improve patient care quality in adults (7). However, less is known about its role in undergraduate paediatrics, with even less known about the advantages of blending simulation modalities.

This novel, blended learning approach combines a web-based virtual patient with traditional high-fidelity simulation to improve the confidence and competence of undergraduate students in dealing with acute paediatric scenarios. It is hoped that this adjunct to clinical exposure may demonstrate the utility of standardised, mixed modality simulation-based teaching of the acutely unwell child.

References:
A Call of Duty: A Medical Simulation. Can a first-person experience style virtual simulation be as effective as simulation training?
J Fukuta, A Coombs, D Alder, B Stuijfzand and J Morgan
Southmead Hospital, North Bristol, University

Background:
First person experience (FPE) games such as the Call of Duty franchise have a large global appeal. They allow people to “experience” what they are playing owing to the immersive nature derived from the first-person view (1), as well as the ability to interact and make decisions, whilst always being in a safe environment. These principles of “experiencing” events within a safe environment are also what underpin simulation training (2). Simulation training is faculty heavy and requires a physical space whilst in contrast a virtual environment requires no faculty and provides remote access. Therefore by trying to move simulation training into the virtual environment possible benefits could be exploited. Virtual training has been employed into surgical training but so far this has been limited to practical procedures and not clinical decision making (3). The purpose of this study is to see if students’ knowledge gain and clinical decision making would be similar between a FPE style virtual medical simulations compared to traditional simulation training.

Methodology:
We have devised a randomised controlled trial with 40 students. We have designed and produced a virtual medical simulation concerning the management of an upper gastrointestinal bleed. To make it more immersive, similar to a FPE, it was filmed in first person and has decision making elements which can alter the subsequent clinical course leading to multiple possible end points for the patient. The students will be randomised into two groups with the intervention group playing through the virtual medical simulation whilst the control group will undertake a traditional simulation training session scripted to be the same as the virtual simulation. Knowledge gain will be assessed with all 40 students sitting a test both prior to and after their respective initial intervention. After five weeks both groups will then be exposed to a second simulation with the same clinical diagnosis but scripted with a different clinical presentation and subsequent course to the virtual simulation. Clinical performance will be assessed with “time to” treatment decisions and non-technical skills assessed using the validated Ottawa Crisis Resource Management score (4). We will also ask the students about their experience with the FPE virtual medical simulation.

Results:
The study is to be carried out between January and March 2017. The clinical decision making and knowledge gain results will be analysed using a students’ T-test. Students’ qualitative comments regarding their experiences will be analysed using thematic analysis.

Discussion:
We hope the study will show a non-inferiority of the virtual simulation compared to traditional simulation training. Whilst traditional simulation training will have other advantages beyond those being studied in this trial, if clinical decision making and knowledge gain are similar it raises the possibility of FPE style virtual simulation being incorporated into the medical curriculum which could help overcome the faculty, physical space and financial requirements associated with traditional simulation training.

References:

Ref: 280, Board: T2
A time for everything: using video recording to facilitate educational work based assessments

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Gloucestershire Academy, University of Bristol

Background:
Work based assessments have an established use in the clinical training environment, as part of continued professional development of doctors (1). Effective assessment processes are well described. These processes are less developed for clinical teaching fellow (CTF) posts (2,3). Gloucestershire Academy has attempted to address this issue by the development of a work based educational e-portfolio, incorporating novel assessment techniques that specifically address educational issues. These were presented at the ASME conference in 2016 (4).
The time taken to undertake work based assessments is a major issue in their completion. This is potentially more of a problem with education assessment, where observation needs to take place over a longer time frame and at times that often inconvenient for the assessor. This project attempts to establish whether the remote review of work based assessments can be effective and timely.

Methodology:
Clinical teaching fellows undertaking teaching of medical students video recorded their presentations. Students were specifically not included in the video shot, although their responses to questions were recorded. The recording was watched by an assessor at a time suitable to their schedule. Finally feedback was given to the CTF in a scheduled session, with the use edited video clips to aid discussion. Feedback on the process was collected from CTFs and assessors using a structured questionnaire.

Results:
Full results of the study will be presented at the ASME conference, including advice on practical aspects of optimising technology to ensure optimal feedback.

Discussion:
The role of the CTF continues to evolve and access to validated assessment processes that allow demonstration of progression of teaching skills and engagement with CPD is an important aspect of this career development. Video review of teaching episodes provides a practical method for ensuring that assessments are conducted in a timely fashion.

References:

Ref: 414, Board: T3
A virtual patient using first person perspective video technology. A comparison with tutorial teaching.
J Fukuta, A Coombs, D Alder and J Morgan
Southmead Hospital, North Bristol Academy, University of Bristol

Background:
Virtual patients are computer based teaching tools that allow students to go through a clinical case within an e-learning environment. By gathering and analysing clinical information it encourages students to make decisions which develop clinical diagnostic skills (1). There are a large variety of styles that virtual patients can take, but most involve static images or computerised patients which detract from the realism of a clinical case. In contrast videos of real people can add realism. Work we carried out previously, further enhanced this using an action camera to film a clinical scenario using a first person perspective. We therefore wanted to see if combining the clinical decision making of a virtual patient with the authenticity of filming a real clinical scenario may lead to increased gain in clinical knowledge as well as confidence in treating a clinical scenario. Most studies using virtual patients have been non-comparative in nature (2); we wish to compare our novel video based virtual patient with that of a standard tutorial to see if there is any difference in knowledge gain and confidence.

Methodology:
We have generated a virtual patient covering the diagnosis and management of supra ventricular tachycardia. It was filmed using a GoPro © camera to capture it in first person whilst using Adobe Captivate to incorporate decision making elements within it. We have designed a randomised controlled trial using a total of 70 medical students. All the students will sit a pre-intervention questionnaire to assess prior knowledge. The students will then be split into two equal groups with one group watching the video and a second group who will attend a standard tutorial. Each group will then answer the same questionnaire post intervention to see if the level of improvement is different. To ensure equality the groups will be crossed over to ensure both groups will get the same teaching opportunities. Afterwards qualitative questions will be asked about which teaching modality they preferred and their confidence of managing the clinical scenario.

Results:
A pilot study was carried out involving 18 students. Mean self-reported confidence was scored out of 10 and in both groups increased similarly from 1.2 to 5.1 (n=11) in the tutorial group to 1.9 to 6.3 (n=7) in the virtual simulation group. In terms of clinical knowledge there was a post test score of 15.8 in the tutorial group and 17.6 in the virtual patient group (p=0.025). The remaining 58 students will be enrolled into the study from January and results analysed by March.

Discussion:
By combining a virtual patient with video technology we have tried to enhance clinical decision making by adding realism and authenticity. We have compared its use against the more traditional teaching technique of a tutorial. Although the sample size in our preliminary data is small it is encouraging with similar enhancements in self-reported confidence and possibly better improvements in clinical knowledge compared to a tutorial. A larger trial is currently under way to see if these results can be replicated

References:

Ref: 175, Board: T4
Bringing drama into the learning environment using “cinemeducation”

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Princess of Wales Hospital, Bridgend

Background:
Cinemeducation has been defined as the use of films and television clips to teach about the bio-psycho-social-spiritual aspects of health care (1). It has been employed to cover topics such as breaking bad news, ethics, teamwork, professionalism and empathy. The development of skills in these areas is essential for both undergraduate and postgraduate medical students, as well as other health care professionals.

Methodology:
A three hour teaching programme on “The Learning Environment” was provided to students undertaking the Postgraduate Certificate in Medical Education at Cardiff University. This programme was designed and delivered by Postgraduate Diploma students in Medical Education at the same institution. The session consisted of short presentations and small group work, following which the students were presented with three short clips from medical television dramas. Each of these were chosen to emphasise the importance of a good learning environment and to consolidate what had been taught earlier in the session. First, a clip from “Scrubs” was shown to highlight the importance of mentor/mentee relationships and role modelling. Next, a clip from “Chicago Med” was used to demonstrate how to maximise unexpected learning opportunities which may arise during emergency situations such as a cardiac arrest and a trauma call. Finally, an excerpt from “Grey’s Anatomy” was shown as an example of a learning environment in an operating theatre. Discussion and reflection on the student’s own experiences took place after each clip.

Results:
Informal feedback was obtained from the students following the session. Comments focussed on the enjoyment and perceived value of the session.

Discussion:
We found Cinemeducation a useful and innovative way to consolidate our teaching session on the learning environment. The feedback we received suggested that students valued the variety of teaching methods employed. Medical dramas are familiar and evocative and can bring humour into the learning environment which can help to make the educational experience more enjoyable and memorable (2). Furthermore, audio-visual resources can promote formation and retention of memory (3). Finally, when considering more sensitive topics such as ethics and empathy, the use of film and TV can enhance reflection in a safe and indirect way which may allow a deeper exploration of such topics (4).

References:
4. Pablo González Blasco, MD, PhD; Graziela Moreto, MD; Adriana FT Roncoletta, MD; Marcelo R. Levites, MD; Marco Aurelio Janaudis, MD (2006) Using Movie Clips to Foster Learners’ Reflection: Improving Education in the Affective Domain, Family Medicine 38(2):94-6

Ref: 121, Board: T5
CTF e-Portfolio©: The national rollout of a bespoke Clinical Teaching Fellow portfolio
A McDermott, Z Hossenbaccus, P Davies, A Samuels, ZA Dawood, CD Rodd
Gloucester Academy, University of Bristol

Background:
The number of Clinical Teaching Fellow (CTF) posts is increasing nationally [1,2]. A 2013 University of Bristol survey highlighted a demand amongst CTFs for a role specific portfolio; an understandable request in view of the introduction of revalidation and appraisal of development [3,4]. In reaction to the growing need for a standardised but bespoke platform, Gloucestershire Academy developed a novel e-portfolio (www.ctfeportfolio.uk). This was designed to comprehensively capture a CTF’s progress during their post. This portfolio was piloted locally and presented at ASME in 2016 [5]. The findings demonstrated that CTFs and their supervisors felt that the portfolio was able to promote reflection and encourage appraisals, whilst remaining easy to navigate. These outcomes are in line with the GMC Promoting Excellence guidelines [6].

In response to the positive local feedback and interest shown from different medical schools around the country, a national pilot of the CTF e-portfolio© was commenced. This study aims to evaluate the response to, and engagement with, the CTF e-portfolio© from various sites around Severn, London, Wales and Newcastle. These sites encompass CTF roles that vary greatly in setting, content and structure.

Methodology:
The portfolio was advertised to CTFs in various sites around the UK. Contact was made via undergraduate deans, administrators or with CTFs themselves. The sites were chosen from medical schools with an established relationship with Gloucestershire Academy, as well as with those that had expressed interest in the portfolio through exposure at ASME. Training was provided to each of the recruited centres. Each site was asked to nominate one CTF to become a lead for the portfolio. They received telephone training and became de facto ‘Superusers’, able to train all other CTFs at their site. Reminders were sent to promote continuing engagement with the portfolio throughout the academic year.

Quantitative and qualitative data will be collected through a Likert scale and free text questionnaire in April 2017 from CTFs and their supervisors at every site. This data will be interpreted in conjunction with usage metrics obtained from the portfolio website and also training feedback.

Results:
Results of the national pilot will be available for presentation. Quantitative data will be analysed using descriptive statistics with thematic analysis of qualitative data.

Discussion:
This study will aim to evaluate the response to, and engagement with, the portfolio from CTFs working in different teaching environments throughout the country. By assessing the CTF e-portfolio’s national appeal and application, further implementation into other parts of the country can be considered.

References:
5. Dawood Z, Hossenbaccus Z. A blend of two worlds: Geeks and Doctors creating a bespoke Clinical Teaching Fellow e-portfolio. Presentation presented at; 2016; ASME 2016-TEL

Ref: 214, Board: T6
De-Stressing the Debrief: Using an Audience Response System (Turning Point®) to Facilitate Undergraduate Simulation Feedback

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Background:
Simulation Based Medical Education (SBME) is commonly used to deliver the undergraduate medical curriculum [1]. Students benefit from high-fidelity experiential learning without the associated risks of causing real patient harm [2]. The post scenario debrief, if delivered with expertise, is commonly regarded as a vital and important component of effective SBME [3]. Students receive immediate feedback, identify new learning needs and consolidate prior knowledge through the process of interactive discussion. However, participation in this process is sometimes variable, and students can sometimes display reluctance to freely communicate their opinions during this session. Audience Response Systems (ARS) using clicker pads (Turning Point®) have proven effective in increasing student participation [4], but its use in the simulation debrief is not well documented. This study aims to establish the effectiveness of using Turning Point® in the undergraduate medical simulation debrief. Does it de-stress the debrief?

Methodology:
All students participating in simulation at the Swindon Academy (University of Bristol) will be targeted to take part in this study. Students will undergo conventional debrief (A) and a subsequently one that utilises the ARS (B). In B, students will be asked to rate candidate performance on the following factors: using a structured approach, clinical skills, diagnosis and management, communication, situational awareness, team-work, and seeking help appropriately. Turning Point® will be used to record responses on a ten point semantic differential scale. Candidates, observers and faculty will all vote and responses will be immediately displayed and discussed in the simulation debrief. All participants will be asked to complete a post session evaluation form to compare sessions A and B, which uses ten point semantic differential scales and open text.

Results:
We intend to provide these sessions for 50 students at the Swindon Academy. Results will be available in advance of the ASME Conference. Quantitative data will be analysed using a paired t-test and descriptive statistics, and qualitative data using conventional thematic analysis.

Discussion:
SBME is a useful tool for the delivery of core learning objectives in the undergraduate medical curriculum. This could be augmented by the use of an ARS in the simulation debrief. Some students underrate their performance in simulation, whilst others fail to recognise areas for improvement despite adequate debrief. We feel that using Turning Point® to produce contemporaneous visual feedback may help to better highlight the students’ strengths as well as their individual learning needs. Students may also feel more empowered to give honest peer feedback using anonymous voting systems when compared to the conventional debrief. Through using the ARS to promote discussion in SBME, we aim to facilitate a more structured debrief. This will hopefully benefit all participants (candidates, observers and faculty) alike, and promote a less stressful and enhanced learning environment.

References:

Ref: 255, Board: T7
Do medical students in obstetrics and gynaecology achieve their learning objectives by attending antenatal clinics – would virtual clinics aid learning?

M O’Sullivan
St. Michael’s Hospital

Background:
A large part of the medical student timetable traditionally is attending clinics and observing consultations. Students may also see patients by themselves depending on the supervising clinician and the nature of the clinic/clinical workload. For obstetrics and gynaecology at our university students spend 8 weeks in the department and have a logbook to complete to ensure they receive a varied experience with clinics, theatre, inpatients and labour ward. Students are required to attend 6 general antenatal clinics plus some specialist clinics. Although little can compare to hearing the consequences of a condition from a real patient the challenges of teaching in the clinical setting are well documented.1 Teaching can be very clinician dependant and competing demands of a busy clinic can lead to teaching being unstructured and brief.

Our aim was to ascertain how well students felt they had achieved their learning objectives by attending antenatal clinics. Our hypothesis is that a ‘virtual clinic’ whereby students can watch acted-out consultations of the main obstetric presentations would be a good adjunct to attending clinic and also improve the equity of clinical learning, where some students will not have the opportunity to see patients with certain presentations. Students were shown a pilot of the ‘Virtual Antenatal Clinic’ and asked to give their feedback.

Methodology:
At the end of their 8 week attachment students were asked to reflect on their time in antenatal clinics and then asked to anonymously complete a questionnaire that asked them to rate how well they felt they had fulfilled their learning objectives by attending clinic.

Students were then asked to rate and give feedback on the pilot ‘Virtual Antenatal Clinic.’

Results:
14 students completed the questionnaires (78% of students on attachment, the other students were not present on the day of the survey). Students’ confidence (1 = not confident at all, 10 = very confident) of the different obstetric topics detailed in their learning objectives ranged from 8.0 for vaginal birth after caesarean section (VBAC) to 4.2 (obstetric anal sphincter injuries, OASIS) and 5.1 for obstetric cholestasis (OC).

Students felt that videos of histories and video explanations of conditions would be very helpful and rated the idea of virtual clinic as very useful (9.3/10.0).

The feedback on the pilot of the virtual clinic was overwhelmingly positive. Students felt that a virtual clinic where the patients presented with just 1 problem would be very useful before they see the more complex patients in clinic, they also felt the virtual clinic allowed them to see a breadth of patients that they may not see in clinic.

Discussion:
Obstetrics as with medicine in general is becoming increasingly complicated. Women who would never previously have reached childbearing age are now becoming pregnant, with increasing maternal obesity and comorbidity clinics are increasingly complicated and busy. A virtual clinic allows patient presentations to be distilled in order that students can gain an appreciation of the basic principles of history taking and antenatal care which would better prepare them for observing the more complicated patients they will encounter in the clinical setting.

References:
Spencer J. ABC of learning and teaching in medicine Learning and teaching in the clinical environment. BMI Vol 326, March 2003.
Does ‘pager simulation’ improve the confidence of final year medical students for on-calls?
Imperial College Healthcare NHS Trust

Background:
Surveys indicate that only 49% of junior doctors in the UK feel well prepared for practice1. Medical schools have a responsibility to prepare students for this major transition – both to reduce stress amongst the new cohort of doctors, and importantly to improve patient care and reduce unnecessary errors. Particular areas of weakness identified include managing medical emergencies, safe prescribing, handover to colleagues, and time management2, and thus on-call shifts are a frequent source of anxiety3. At Charing Cross Hospital, we have developed a pager simulation programme for final year medical students, with the aim of improving students’ perception of their preparedness for on-calls.

Methodology:
The pager simulation programme involved allocating each final year medical student to a day as a ‘Foundation Year 1 (FY1) on-call’. Throughout the day they were contacted via ‘bleep’ (pager) by teaching fellows acting as nurses, senior doctors, or patient relatives, and given clinical scenarios to act upon. Tasks were completed in the clinical skills lab under observation and included practical procedures such as cannulation, prescription of medications, and the review of acutely unwell patients (SimMan®). Students were debriefed at the end of the day. After their session students were asked to complete a Likert-scale questionnaire reporting on their confidence for on-calls prior to and after pager simulation. Students were also asked whether they had enjoyed the session, whether they learned anything new, and whether this teaching method was more or less useful for learning about on-calls than shadowing junior doctors. White space questions were included asking which aspects of the session were most enjoyable, and which areas needed improvement.

Results:
The questionnaire was completed by 17 students, and results showed a statistically significant improvement in confidence following the pager simulation session as calculated using the Wilcoxon signed rank test (before-simulation mean score 1.24, after-simulation mean score 3.26, p-value that bleep simulation was more useful for learning about on-calls than shadowing junior doctors, with an average Likert scale response of 4.29 (1 = ‘much less useful than shadowing’, 5 = ‘much more useful’). In answer to the white space questions, students commented that they enjoyed the opportunity to practice handovers and documentation, and liked the fact that “we [the students] were in charge and the responsibility was upon us”. Comments also included “I like how real it felt. We were placed under pressure in the situation, just as how I expect we will be this time next year.” and that “nothing else in our course has given us a feel for being on-call so I found it really useful”.

Discussion:
Pager simulation is a valuable teaching method, in which the stress and complexity of an on-call situation can be replicated. It requires students to carry out a variety of tasks, prioritising them by clinical urgency, and tests both technical and non-technical skills. Notable aspects commented on by students included the opportunity to take responsibility for patient care and make decisions, to practice handover, and to document notes. An improvement in confidence following the intervention was also seen and combined with other methods of familiarisation with on-calls, such as shadowing blocks prior to FY1, this programme could improve FY1 performance and ultimately patient care.

References:
Don't be a stress head
KJ Ferguson, R Holman, D Winters, M Gosling, K Williams, N Jakeman
Bath Academy

Background:
The GMC in their document, ‘Supporting students with mental health conditions’, recognise that stress is extremely common among medical students and that as educators we have a role in recognising this and providing support (1). Stress itself is not only distressing for the individual but can negatively impact performance. The Yerkes-Dodson law (2) shows that for more complex tasks, once a certain level of stress is reached the ability to perform falls. This has not only been shown to be applicable to technical skills (3) but also to crisis resource management (non-technical skills) (4). Previous research has found a correlation between the stress produced during simulation and real life scenarios (5). Harvey et al (6) suggested that individual reactions to trauma scenarios, for example whether the scenario is perceived as a ‘threat’ or a ‘challenge’, influenced their reaction to the stressful simulation and the authors felt that interventions targeting stress management were therefore an important part of education. Lastly, repeated simulation is thought to reduce stress but this was only based on non-parametric testing (7).

Methodology:
Aim
Can simulation be used as a tool to teach undergraduate medical students how to positively manage stress in acute scenarios?
We will recruit twenty 5th year medical students and limit heterogeneity of controllable factors such as age, sex and previous simulation experience. They will be split into two cohorts. The first will undergo a stressful simulation followed by a debrief using the diamond method (8). This would then be followed by the same stressful simulation in two weeks’ time. The second cohort would have the same simulation-debrief-simulation method but with the addition of an afternoon small group teaching session on managing stress inbetween the simulations.
Measurable outcomes include heart rate and self-reporting of stress. We will use Fitness technology to measure heart rate throughout the simulation scenarios and the State-trait anxiety Inventory (STAI) for self-reporting. There will also be a free text box for students to describe how they felt during the simulation. We will collect baseline data on both HR and anxiety levels for comparison.

Results:
Data collection will be completed by March 2016. The results from the two groups will be compared and statistically analysed using the T-test. Content analysis will be performed on the free text box responses. Firstly, we hope to gain data to see if repeating simulation helps to reduce stress and anxiety. Secondly by adding in the additional ‘managing stress’ session we can see if this also influences stress levels independently of simulation.

Discussion:
Conclusions will be drawn from the results. Stress can have a big impact on performance and is distressing for the individual. We expect the results may demonstrate reduced stress levels as a result of both repeated simulation and an additional session on ‘managing stress’. Stress is becoming increasingly prevalent in the modern day NHS and something we all need to be aware of.

References:
1. GMC. Supporting medical students with mental health conditions. GMC; 2015.
**Electronic marking of OSCEs: literature review and local evaluation**

H Thampy, M Pollitt
Division of Medical Education, University of Manchester

**Background:**
Medical students increasingly expect to receive high quality feedback from both formative settings in clinical placements and summative assessments. Therefore, medical schools are turning to technology in order to enhance the provision of such high quality feedback. In addition, technological advances in assessment processes have been seen to offer a multitude of logistical and economic benefits. This presentation will firstly report findings from a literature review and then report evaluation findings from our own medical school which recently moved from paper-based to electronic-based marking systems.

**Methodology:**

**Literature Review:**
A review of the existing English-language literature in this area was conducted using the Pubmed and Scopus databases. Keywords were searched for using synonyms and truncations in order to make the search as comprehensive as possible and used the following: any of ‘OSCE’, ‘objective structured clinical assessment’ ‘clinical assessment’ combined using the Boolean operator AND for any of ‘mark$, feedback, technolog$). The resultant list was then screened for relevance initially using a title review and then abstract review. Only papers that specifically focussed on the topic of electronic marking of OSCEs were included.

**Local Evaluation:**
Up until 2015, our medical school utilised handwritten marksheet for OSCEs. Subsequently, iPad based marking was introduced. In order to evaluate the logistical and economic impact this had, a cost-benefit analysis was conducted. Secondly, we ascertained students’ views of the pedagogical impact of electronic marking using an email survey of students who had experienced both feedback systems. Using Likert-scales, students were asked if they felt there were differences in the quality or quantity of the feedback they received (handwritten versus electronic) and the perceived impact this has on their onward learning. Thirdly, word counts were calculated for free-text comments on each OSCE station marking form using electronic feedback (n=7440) and a sample of handwritten forms (n=1328).

**Results:**
The literature review revealed only four published articles. Full details of the articles’ key research conclusions and/ or main discussion points will be presented.

The cost-benefit analysis from our local evaluation demonstrated a number of logistical benefits including rapid collation and analysis of scores, typed legible feedback immediately after each OSCE cycle and a reduced paper burden. Furthermore, the transition to electronic marking reduced error rates (i.e. those mark sheets which require a manual intervention) from around 25% to around 0.5% per OSCE. Full costing analysis revealed a saving of around £16,000 per annum.

The introduction of iPad marking resulted in a statistically significant rise in median word count per feedback form. 93 students out of 431 completed our email survey (response rate 21.6%). 66% of respondents felt that the quality of the feedback they received had either “slightly improved” or “significantly improved” using the electronic system. In addition the results suggest that students were more likely to use electronic feedback to trigger onward learning than compared with handwritten comments.

**Discussion:**
The results suggest that iPad-based electronic marking offers a time-saving and cost-effective method of delivering station-specific personalised feedback to all OSCE candidates. Our local results demonstrate that considerable administrative time has been saved, significant reductions in error rates and a return of original investment within the first 3 years of implementation.

Furthermore, and arguably more importantly, the introduction of this system has shown positive pedagogical benefits. Electronic marking has not only increased the quantity of feedback provided to students, but has likely also increased the quality of feedback provided given that there are significant rises in students’ self-reported use of their feedback as part of their future learning.

Ref: 105, Board: T11
EYE SEE! The impact of slit lamp with video display on learning, assessment and feedback.
Robert Nutt,
Great Western Hospital

Background:
Slit lamp examination is recognised as being a challenging skill to teach, learn and assess, exacerbated by how so little time is given to ophthalmology at most medical schools1,2. This renders most medics with low confidence and competence at slit lamp examination when they qualify - a significant problem given that eye problems commonly present to emergency departments (ED) where non-ophthalmology doctors are expected to use the slit lamp to assess and manage these patients.
Here, it is proposed that a hands-on teaching session using a slit lamp with live video display enables a unique and effective learning experience whereby participants can be given targeted feedback on performance and have their ability accurately assessed.

Methodology:
A basic slit lamp skills tutorial has been designed for under- and post-graduates using a slit lamp with live video display as an aid. The session involved a demonstration anterior segment examination with the live video display providing a clear standard for the examination. Students then practised the examination with the teacher giving concurrent feedback and instruction. At the beginning and end of the session the students were asked to carry out an anterior segment examination with the image streaming so the teacher could assess performance. A mark was given for each structure (lids/lashes, sclera, cornea, anterior chamber, iris and lens) satisfactorily examined. Pre and post session scores were compared to gauge effectiveness of the session.
Participants were also asked to rate their confidence to examine different structures before and after the teaching on 4 point Likert scales. This data was analysed to evaluate student self-assessment of their ability to use the slit lamp pre and post session.

Results:
4 undergraduate students so far have completed this session. Early results: the mean number of eye structures (out of 7) satisfactorily examined pre session was 1.75 compared to 6.5 at the end of the session. The average confidence to use the slit lamp correctly as rated on a four point Likert scale was 1.5 before the session and 3.5 after the session. Further results will be added, analysed and presented at the conference including from post graduates (ED junior doctors) who undergo the session.

Discussion:
Preliminary results of this study suggest that a slit lamp with live video display is an effective teaching tool for slit lamp examination, indicated by the improvement in assessment scores pre and post session as well as the increase in participant confidence to carry out competent anterior segment slit lamp exam. The video display is unique in enabling clear and targeted feedback/instruction to be provided by the teacher as participants watch the image. The objective pre and post session scores which were easily obtained is testament to the fact that the image display creates a valuable method of assessment of this important skill. Overall, this technology may be used to improve and assess competence of slit lamp examination skills in under- and post graduates. Ultimately the technology may therefore improve safety of patients with eye problems presenting to the ED.

References:
From Professional Bureaucracy to Faculty Family
S Bull, J Toomey, S A Bull,
University of Exeter Medical School

Background:
A Problem-Based Learning (PBL) faculty has all the hallmarks of a professional bureaucracy (1). They embody staff who have had elaborate training, expertise in specialised areas, possess internal values and a need for autonomy. These traits bring many advantages to an educational team, yet can also threaten the cohesion of that community (2). Faculty cohesion is particularly important for a PBL team. Students, understandably, desire a unified and equivalent learning experience, yet this needs to be achieved within an environment where small groups meet in isolation, learning outcomes are purposefully not well-defined and PBL facilitators (n=32) have varying professional backgrounds.
Our aim was to develop a co-ordinated PBL faculty family, in order to improve the parity of educational experience for our learners.

Methodology:
Annual facilitator training, production of facilitator case notes and email communications were established ways of co-coordinating the PBL faculty. In January 2015, Co-leads of the PBL Programme reviewed processes and created a PBL Facilitator Google© site, populated with all staff-facing resources and linked to relevant student and administration documents. Attention was paid to easy-navigation, visual appeal and the ability to adapt the content quickly.
Utility of the site was evaluated using Google analytics data and by surveying the facilitators’ responses to the innovation.

Results:
A Google© site of 15 pages was created providing details of the team members, practicalities of running and assessing a PBL group, student feedback on their PBL experience, results of collaborative training projects and educational literature on PBL. The site is now central to staff induction and is used regularly by PBL facilitators and the PBL Co-Leads.
Advantages of the site for the faculty have been accessibility of information, streamlining of operational processes and capturing institutional memory. Facilitators reported that ‘the site functions well and all information is easily found’, ‘it provides useful information and ideas’ and ‘I feel clear as to what I should be doing’. More detailed findings will be presented at the conference.

Discussion:
Collaboration, a culture of sharing and consistency of approach is being developed. Readily available on-line information mitigates against cognitive overload, email burden and unnecessary paper usage.
The PBL faculty now has a digital home, a solid base of information from which we can grow and develop. We believe the use of this site by facilitators, may promote students to receive a more unified learning and assessment experience, as well as developing a collegiate faculty family.

References:
Immersing the student in acute medicine: the use of 360 degree filming to experience Cardiopulmonary Resuscitation
A Coombs, J Fukuta, J Morgan
North Bristol NHS Trust

Background:
360 degree videos allow the watcher to view the scene in every single direction, choosing what aspect to observe at any given moment. When using a mobile smart device it can be viewed through a headset that allows a completely immersive experience. 360 degree videos have not, to our knowledge, been utilised in medical education thus far.

Medical students exposure to real life resuscitation is limited. Price et al (1) reported that only 50% of doctors had attended a real cardiac arrest during their final year as a medical student. However, once they become a doctor, they are a member of the resuscitation team and are expected to perform to high standards in order to give the patient the best chance of survival. There is literature highlighting the success of teaching the resuscitation algorithm through simulation (2) along with the use of video feedback (3). However despite this less than 50% of final year medical students feel that they are able to work effectively as a member of a resuscitation team (4). Moreover, 82% of junior doctors found the experience stressful despite a high proportion stating they were competent at resuscitation. (5).

The aim of our research is to investigate the use of 360 degree filming to allow the students to experience a resuscitation situation. The 360 degree filming will allow the student to explore the environment and focus on different elements of the resuscitation, with multiple viewings if desired. The aim is not to teach the student the resuscitation algorithm but to create familiarity with the situation and the environment, so that they are more confident during their first experiences at real cardiac arrests as junior doctors.

Methodology:
A 360 degree video of a simulated resuscitation has been filmed using a 360 degree camera and uploaded on a secure website. 40 final year medical students based at North Bristol NHS trust will be randomly allocated into two groups. All the students have had Basic life support (BLS) training on models previously. All students will complete an initial questionnaire assessing their opinions on how prepared they feel and their attitudes towards resuscitation. Throughout the 16 week block all students will participate in an unexpected resuscitation simulation where they will be the junior doctor on the resuscitation team. The control group will not have seen the video prior to the simulation. The intervention group will have access to the website where they can watch the video as many times as they wish. Both groups will repeat the initial questionnaire after the simulated cardiac arrest to see if there is any difference between the two groups.

Results:
The hypothesis is that the students with previous exposure to the video prior to the simulation will have a greater understanding about how a resuscitation functions, staff roles within the team and feel more comfortable that in environment. This will lead to improved confidence regarding attending real life resuscitations in the future. We are not expecting the students that have watched the videos to perform better during the simulation given that they have all previously had the same BLS training. Results will be collected from January-March 2017.

Discussion:
The scope for use of 360 degree videos in medical education is wide and varied, in both undergraduate and postgraduate education. It allows students to fully immerse themselves in the environment, providing a learning experience that current simulation could never achieve. It allows the student to experience medical and surgical emergencies, taking in the environment as a whole, but also allowing them to focus on different aspects of there choosing. Future work may include further videos of emergency situations, videos introducing clinical environments such as an operation theatre and videos of practical procedures. As the technology improves the possibilities using 360 degree filming can only increase. These are the first steps towards using virtual reality in medical education.

References:
Improving access to clinical guidelines by a developing a Smartphone App
Joanne Petrie, A MacBrayne, R Brown
Imperial College NHS Healthcare Trust

Background:
Clinical guidelines at our Hospital Trust (Imperial College NHS Healthcare Trust) are stored on “The Source”, an online repository. Junior doctors have persistently highlighted the difficulties involved in accessing these guidelines. Due to increasing demands on the system, not only does “The Source” frequently crash, but it can take over 5 minutes to load a guideline. “The Source” is not user-friendly and difficult to search through guidelines because they are stored in a .pdf form. In addition, computer access in some clinical areas, e.g. Accident and Emergency and Medical Admissions is very challenging. These factors significantly limit the clinical utility of these trust guidelines for junior doctors.

Methodology:
In conjunction with a software company we developed a smartphone App to allow rapid, portable access to Trust clinical guidelines. Through online surveys and focus groups we identified 35 key clinical problems as priorities for guidelines for junior doctors.

Results:
The 35 clinical problems identified were: Abnormal Liver Function Tests, Acute Coronary Syndromes, Acute Renal Failure, Alcohol withdrawal, Arrhythmia, Asthma, Community Acquired Pneumonia, Continuous Obstructive Pulmonary Disease, Febrile Neutropenia, Delirium, Diabetic Ketoacidosis, Falls, Giant Cell Arteritis, Head Injury, Heart Failure, Hyponatraemia, Hypertension, Hypertonic Hyperosmolar State, Hyperkalaemia, Hypoglycaemia, Hyponatraemia, Jaundice, Major Haemorrhage, Non-invasive Ventilation, Pneumothorax, Pulmonary Embolism, Sepsis, Sickle Cell Disease, Status Epilepticus, ST Elevation Myocardial Infarction, Stroke/Transient Ischaemic Attack, Subarachnoid Haemorrhage, Thrombosis in Stroke, Upper Gastrointestinal Bleeding and Venous Thromboembolism.

We identified 18 Trust specific guidelines addressing these clinical problems. For a further 14 clinical problems we found national guidance which addressed the problem and obtained permissions to incorporate it within the App.

Discussion:
Altogether we addressed 32 clinical problems that were a priority for junior doctors by means of 35 clinical guidelines incorporated into an App format. A pilot of this App has just commenced at our Trust and we are collecting data regarding Guideline usage on the App, compared to on “The Source”.

Ref: 290, Board: T15
Increasing access to clinically relevant anatomy in orthopaedics: harnessing the potential of interactive online learning resources

E Griffiths, B Aherne, D Watchorn, A Christie, F Monsell
University of Bristol

Background:
With advancing technology and its increasing access, medical education is changing; including the potential for teaching of anatomy(1). This changing approach to teaching and learning(2), combined with some difficulty or reluctance for students to attend theatres, prompted a question as to how to harness this change for the vertical integration of clinical anatomy in orthopaedics. Can computer based learning become an invaluable part of orthopaedic education(3)?

This project, guided by students and surgeons, is an attempt to see if a technology enhanced online resource can increase access and knowledge of surgically relevant anatomy to allow students to have the confidence to manage orthopaedic patients and participate in a surgical environment. It will build on the fundamental anatomy knowledge of preclinical years and increase the learning potential in the clinical environment.

Methodology:
This project involved focus groups with students who had recently undergone the orthopaedic teaching element in our medical school. We discussed what the barriers were to learning surgical anatomy and how they thought it could be improved. We also sent out questionnaires asking about students’ willingness to engage in a new online resource to supplement their clinical learning. We were supported by our Technology Enhanced Learning department in how to create an e-learning resource (using the software package Xerte©). We completed research into methods and theories of teaching(4) to inform our design, particularly the design of interactive tools. Following analysis of the responses, we developed this resource to include clinically relevant anatomy, common pathologies of the hip (with the potential to expand at a future date if successful) and surgical videos to increase understanding.

We collaborated with orthopaedic professionals within Bristol and a Professor of Orthopaedic Biomechanics in Bath to help us gain the information and resources that we needed.

Results:
We developed a full and comprehensive rich-media e-learning resource with interactive tools. The resource included: hip anatomy knowledge, an interactive 3D model of the hip joint, a complete hip joint examination, videos of hip surgery, with voiceovers detailing the procedures, and pre and post operative care of these orthopaedic patients; and practice exam questions.

We then organised focus groups and asked several students and orthopaedic professionals to review our resource, receiving positive feedback in terms of content, usability and perceived usefulness.

Discussion:
Education is an ever-changing phenomenon and it is only right that even in terms of a static knowledge base the resources should reflect this(5, 6).

This e-learning resource is aimed at every medical student; both the budding orthopaedic surgeons and those without an interest in surgery or orthopaedics. It aims to cover essential knowledge, which will improve clinical practice and the care of many orthopaedic patients. It is hoped that with an online resource such as this; students will be able to supplement tutorials and clinical experiences with personal study that is interactive and can be used in as much or as little detail as needed for each individual. It has been designed to facilitate the initial teaching of the orthopaedic course content but also as a revision tool, incorporating knowledge from other elements of the course using the increasingly popular case based learning model(7).

We are finalising the inclusion of this resource into our University Curriculum. Once this occurs, we are planning on conducting cohort studies to assess the success of our finished resource according to both clinician opinion of students and examination results.

References:
Integrating technology to innovate teaching and learning of clinical reasoning in undergraduate psychiatry
T Strange, F Hussain
NTW NHS Mental Health Trust

Background:
The nascent role of junior teaching fellow in psychiatry has afforded the freedom to deliver near peer teaching while enhancing the programme through development. Psychiatric formulation is the framework taught to scaffold the integration of undergraduate theoretical knowledge to the application of clinical reasoning. As a tool it integrates formal content delivery with real clinical cases mirroring the student’s rotation which consists of both elements. Our design aims to enhance students formulation modelling and integrate core psychiatric knowledge with high fidelity scenarios. The delivery of the skill in a more collaborative fashion espouses the multi-disciplinary team and collaborative nature intrinsic to psychiatric work. This intention was further informed by educationalist methodology, in particular reinforced by social learning theory as discussed by Albert Bandura (1). We analysed prior fragmentary tutor dependent tutorials and designed a student driven structured case based learning format centred in utilisation of technology.

Methodology:
The project aims to provide an interactive learning environment encouraging subject mastery, team collaboration and presentation proficiency. Specifically two, three hour facilitated sessions were delivered to each cohort of final year students. Resources produced present high fidelity and expansive clinical case scenarios to students reflecting their learning needs and curriculum expectations. Students utilise IPads in small groups to process the case material enhanced by validated resources available within the google chrome bookmarks including current guidelines and diagnostic criteria. A formulation template on the IPad’s Google Drive App allows for application of the desired model of clinical reasoning – this simultaneously synchronises with the medical education account, allowing seamless delivery of presentations to peers using a projector at the end of the session. For groups who finish ahead of time, case addendums and caveats with integrated video media relevant to learning outcomes is available through the Prezi Viewer App. On completing the two session programme, the case resources, completed formulation templates and Prezi Presentations are made available for all students to access as an off-site online resource for future use to complement the package of educational resources we have generated to encourage student learning.

Results:
Data gathered over a three month period from objective observation of student engagement, formal subjective student feedback and consultant feedback of the student’s ability to actualise the skills in clinical environs and enhance their roles within the apprenticeship model used on clinical attachments will be presented.

Discussion:
The model utilised is effectual in creating a problem rather than subject centred approach while creating relevance to the learning and engendering internal motivation. This andragogical (2,3) methodology promotes self-directed learning (4). The model largely overcomes the variability of tutor proficiency on learning. In addition to the aforementioned merits the students are peer assessing and developing their own resources alongside learning. The design and resources are flexible in that they have utility in the delivery of a multitude of teaching sessions.

References:

Ref: 353, Board: TT1
Integration of a bespoke multisource feedback tool into a clinical teaching fellow e-portfolio
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Background:
The Multi-Source Feedback (MSF) assessment is used throughout medical training as a demonstration of professional competence. Members of the multi-disciplinary team are selected by the trainee to evaluate specific aspects of both professional and clinical practice. This information is fed back to the trainee and can be used as evidence in the process of appraisal and revalidation. The GMC approve multisource feedback as an assessment of generic professional capability (1). As current MSF tools are targeted towards clinical medicine, a tailored 360ο MSF tool was developed in paper form earlier this year to assess clinical teaching fellows (CTFs) in accordance with the domains of ‘Good Medical Practice’. Results were presented at ASME 2016 and feedback was positive (2). The aim of this project is to pilot and evaluate the MSF tool in an online format, when it has been integrated within a CTF e-portfolio.

Methodology:
The peer reviewed MSF tool will be integrated into a novel CTF e-portfolio and will be piloted in March 2017. Data will be collected through evaluation forms completed by both CTFs and assessors. Feedback regarding the content, ease of use and applicability will be analysed.

Results:
Full results and analysis of the MSF tool will be available for presentation.

Discussion:
A CTF specific MSF tool is an assessment that can be used to give feedback and guidance on CTF performance, professionalism and teamwork behaviours. CTFs increasingly use an e-portfolio to document progress and evidence of continuing professional development. There may be increased value in electronic recording of this form of feedback, especially with regard to appraisal and revalidation.

References:

Ref: 324, Board: TT2
Keep calm and manage the outbreak! Teaching medical students about Public Health

C Yu, J Fox, K Jones
The Academy, Great Western Hospital, Swindon, UK

Background:
Public health remains increasingly relevant in today’s world and this is reflected in the GMC’s recommendations for the training of medical undergraduates. (1, 2) However, the teaching in this area has long been recognised as less robust compared to other areas of the curriculum and while this has improved significantly over the last 10 years, it has been recognised that more innovative approaches are required to supplement traditional teaching methods. (2-4).
One such innovation which has been trialled involves teaching students epidemiology and outbreak management via virtual simulations, which has suggested improved student participation and improved examination scores (5, 6). As the University of Bristol is currently changing their undergraduate curriculum to a ‘Helical Theme’ format with a domain focusing on Global and Public Health, we wanted to pilot a similar teaching innovation on a group of students in our current student cohort to see whether this approach is a realistic and feasible method of engaging medical students with Public Health education.

Methodology:
The simulation exercise will consist of a web-based platform designed to simulate the progression of an infectious disease outbreak, with opportunities for group learning. It allows students to explore different interventions and for discussion of the various aspects of the case amongst group as the simulation progresses. The aim is to pilot this project on a small group of students in the current cohort based at the Academy at the Great Western Hospital to determine its efficacy. Data will be collected through staff and student evaluations of the simulations. The efficacy of the simulation as a teaching innovation can also be assessed by comparing students’ knowledge and ideas before and following their completion of the simulation exercise.

Results:
This project is currently underway and data collection is in process.

Discussion:
Technology enhanced learning has a lot of potential to supplement undergraduate medical training, particularly in improving students’ awareness and understanding of key aspects of Public Health. This project aims to demonstrate one such way that teaching innovations can be used to enhance student engagement in the learning process and as a novel environment for learning.

References:
Microsoft Surface Hub - a new tool, or just a fad?
M Allum
Yeovil Academy, Yeovil District Hospital

Background:
New technology is often regarded with much interest within medical education. However, it is important to ascertain whether the technology improves the educational process, or merely replaces other learning tools (1). The Microsoft Surface Hub is a new device made available to a limited number of educational settings within the University of Bristol. It had a multitude of functions which could be applied to teaching delivery. The aim of this poster is to report the initial experience in how it can be used to help deliver the undergraduate medical student curriculum.

Methodology:
During their 9 week placement at Yeovil Academy, 3rd year medical students will be taught using the Microsoft Surface Hub in a variety of methods. This will include substituting the traditional projector for displaying Powerpoint presentation, using the interactive whiteboard to electronically save student and teacher’s annotations, and potentially the use of recording video via Skype for Business. There is also potential for a conference call-based teaching session with one or more of the other University of Bristol facilities which hosts this technology. The students will also receive more traditional-style teaching as well during their placement. At the end of the 9 weeks, a focus group of students and teachers who have used the Surface Hub will be convened to provide qualitative data on its effectiveness via discussions and feedback.

Results:
Preliminary use of the Surface Hub has had positive feedback from students. Aside from the novelty of using different technology, they particularly liked the ability to save the contents of the annotated interactive whiteboard. It is anticipated that using the Surface Hub more often and in an increasing variety of methods will further the benefits in terms of student learning experience. The potential for using this for collaborative teaching between academic sites should provide unique learning opportunities, particularly in a district general hospital setting.

Discussion:
Evaluating the use of new technology in medical education is crucial to see how it integrates into the existing delivery of curriculum. Furthermore, special consideration must be given towards what technology is suitable in the context of the local educational requirements.

References:

Ref: 314, Board: TT4
Optimising primary care COPD management using an app that incorporates specialist peer feedback
R Bharamgoudar, E Blurton, R Bharamgoudar, A Sonsale, A Turner
University of Birmingham

Background:
With £800 million in direct healthcare costs [1] and an estimated 1.2 million diagnosed with many more undetected, COPD is a major burden on the NHS in the UK [2, 3]. As medical innovation gathers momentum [4], apps will become increasingly central to the paradigm shift in disease management. An app-based system would provide a practical interface to ensure the quick input of key patient demographics as well as ensure adherence to relevant guidelines. Hence, there is great scope for using a COPD app with specialist peer-feedback as a valuable education tool. As one of the world’s leading health care services, embracing modern technology will reaffirm the NHS as a trailblazer in innovation.
COPD treatment in the UK is guided by severity, and often the most cost-effective treatments are underutilised [5]. Medical apps exist but lack specialist input and evidence-based recommendations [6], which put patients at risk and therefore, the solution is to improve care quality by increasing the use of specialists, as well as evidence-based guidelines [7]. A growing body of evidence supports doctors’ willingness to adopt such technologies, showing scope for using apps as an educational strategy [8, 9-14]. Moreover, using apps to deliver education has been shown to improve evidence-based prescribing [15].

Methodology:
This project uses a clustered, randomized, crossover design, in which individual practices are crossed over from intervention to control or vice versa, allowing the team to assess how long the effect of the educational intervention lasts after it has been withdrawn. The management of COPD patients before the start of the study will act as the control. The four-month intervention starts with face-to-face COPD training for all 40 practices, with 20 randomly selected practices receiving tablets. All local GPs will be included with no exclusions.
The app protocols will be adaptable to, and devised using local evidence-based COPD guidelines. Users will be advised on COPD consultations and prompted to input key diagnostic data, which will generate guideline-based treatment choices. Specialist feedback will provide constructive criticism that the practitioners learn and reflect upon, encouraging better practice.
Data from primary care and hospitals will be collected as a baseline. Prescribing habits, pulmonary rehabilitation (PR) referrals, COPD referrals and admissions of COPD for four months before the intervention will act as control datasets. On 1st January 2017, practices in group A (intervention) will be given the app and teaching. Data about app usage will be transferred to the hospital monthly, and individual feedback will be given by the CI to the GP via the app. At the end of the first four months, both arms will crossover, and the intervention will be solely provided to group B. Following the intervention period, devices will be returned to the research team and data will be analysed in the final four months of the study.

Results:
The primary outcome is the level of guideline-based care in the intervention versus control practices, defined as the evidence of compliance with the local COPD guideline. Assuming a correct diagnosis, this will include: smoking cessation advice, PR referral/completion, guideline-based medication, symptoms and exacerbation frequency, and the offering of appropriate vaccinations. Guideline-based care is defined as having four out of five completed care quality indicators. This will be expressed as a proportion of the whole COPD population per group as well as at a practice level.

Discussion:
We expect the project to improve HCP competence and confidence in managing COPD patients in accordance with guidelines. The specialist feedback element is unique, and should help to not only improve patient care but also reduce costs associated with unnecessary prescribing. We expect the app to have a profound national impact with scope for future expansion internationally.

References:


Ref: 217, Board: TT5
QR code electronic feedback - saving time, saving trees
J Hartland, L Evans, M Elsaddig, M Natarajan, K Jones
Swindon Academy

Background:
Feedback is an essential part of teaching assessment, vital to improve both students and teachers experiences. Traditionally paper feedback systems have been used in Swindon Academy for years. Experienced administration staff estimate it takes 1.5 hours taken to input a basic 5 questions feedback form for a one-hour session for 30 students. With increasing need to evidence multiple different educators teaching, apply for grant programs and deal with an expanding student populations continuing with our paper feedback system did not seem viable.
When the Clinical Fellow Team suggested converting our feedback into an electronic format senior staff often hesitated to accept it, mainly citing fear of poor response rates. Studies show that electronic forms often have poor response rate (ref) as they are traditionally followed up with URLs sent in emails, and it would appear many members of staff are innately aware of this barrier.
To overcome this simple but significant hindrance we developed an instantaneous QR code system, which linked to an online survey device. We show here how response rates are significantly better than other forms of electronic format, and argue for the business model of using electronic feedback paired with QR codes as an improvement on time and financial savings, as well as our organisational carbon footprint.

Methodology:
A variety of 5th year teaching sessions were surveyed using the electronic tool Bristol Online Survey with a freely generated QR code linking to the individual questionnaires. Additionally all Simulated teaching was also moved to this electronic format as of August 2016. Data collection is on-going and will continue until May 2017. Students were asked to download free QR scanning apps onto their smart phone devices, and when not possible staff devices were used under supervision
The percentage of responders will be calculated and compared against available data for average response rates with different forms of electronic and paper tools. Students have also been anonymously surveyed for their own opinions and preferences regarding the different forms of feedback using an online survey.

Results:
Data gathering is not yet complete, but by June 2017 this study should have captured approximately 8 months of feedback for all simulations and 5th year tutorial based teaching, expected to amount to approximately 175-200 teaching sessions (currently 105). Time, energy and financial savings will be estimated using online resources and experiences of our administration staff. Our response rate at this time currently sits at 78%, compared to an average of 33% cited in the literature for other electronic survey tools.

Discussion:
Our study is not yet complete however we are currently showing response rates of 78% vs 33% when compared with traditional electronic feedback forms using URL. Estimated savings are not yet possible but likely to be significant on administrative times and financial costs. Analysis of 33 students responses suggests 91% are in favour of this form of feedback over a paper feedback tool, with themes of ‘ease’ and ‘saving paper’ being independently suggested by the students as reasons for their preferences. An additional 30 students are expected to be surveyed in March 2017. Following the completion of project the authors hope to show that this is not only an innovative and financially viable alternative to other forms of feedback collection but is also acceptable, and indeed preferred by students.

References:

Ref: 371, Board: TT6
Setting hearts racing: Going beyond self reported stress in simulation

N Stafford, L Evans, J Hartland & K Jones
University of Bristol / Great Western hospital

Background:
The University of Bristol’s Swindon academy has previously recognised that undergraduate students can find simulation stressful. There is emerging evidence that emotional and physiological stress during learning can improve a student’s task performance and memory formation. Heart rate (HR) and Heart rate variability (HRV) are easily obtainable measurements that appear to be linked with mental stress. Studies looking at hostage taking scenario simulation in police officers have been able to create a graphical representation of physiological stress during the simulation. The implications of this may be that by adapting simulation scenarios to create carefully tailored stressful moments it may be possible to improve a students self awareness, task performance and memory retention. In this study we aim to develop and test a low-cost simple method to allow measurement of a student’s physiological and perceived psychological stress during an on call simulation in order to create a simulation ‘stress profile’ that may allow us to improve simulation scenarios.

Methodology:
Student’s baseline heart rate (beats per minute) and HRV measurement’s (RMSSD, LF, HF and LF:HF) will be recorded prior to the day of the simulation to get a baseline using non-invasive heart rate monitor (Wahoo TIKR ©). Physiological data from this monitor (HR & HRV) will be collected and interpreted by a commercially available smart phone application (Sweetbeats©).

30 final year medical students on their preparation for practice placements will undergo an on-call simulation. All students will wear the above heart rate monitors throughout the simulation and physiological data will be recorded. The students perceived maximal stressor during the simulation will also be recorded by a questionnaire upon leaving the simulation suite. All simulations will be video recorded to allow matching of the physiological data to the events unfolding in the simulation.

Results:
The video recording of the scenario will allow us to playback significant events in the simulation and tie them to the corresponding physiological data from the heart rate monitors. Data will be presented in graphical form with the X axis being time and the Y axis being one of HR or HRV. The identified key learning events of the simulation will be labelled on the graph along with events corresponding to significant change from baseline measurements in HR and HRV (this percentage change value will be determined after data collection). The moments students perceived to be most stressful will also be labelled on the graph. The data from all 30 students will then be used to create an average ‘stress profile’ of the simulation (a graph of time vs Stress with key learning events and stressors plotted and labelled.

Discussion:
This project aims to see if low cost, readily available technology makes it possible to identify specific mental stressors during simulation with view to creating a ‘stress profile’ of the simulation. We propose that this profile could help to identify key stressors for students undertaking the simulation and in the future allow the simulation to be tailored to maximise student learning.

References:
Sim in your Living Room: Development of a bespoke online deteriorating patient simulator
J Guckian, T Johnson, R Ker
Newcastle University

Background:
Simulation is well established in undergraduate and postgraduate medical curriculae[1] and evidence suggests simulation gives students greater confidence in recognising and responding to clinical deterioration in adult patients[2]. Indeed, ‘Kinesthetic’[3] learners learn best with practice or simulated scenarios[4]. At the time of writing, there did not exist a free, online ‘simulated’ patient in order to facilitate management of the deteriorating patient. There is also a lack of focused review in the literature of the impact of online simulation programs in undergraduate or postgraduate medical education. This project aimed to develop and evaluate a freely available e-learning package designed to mimic the acutely unwell patient.

Methodology:
An online patient simulator, entitled 'PatientSim' was developed and hosted on www.medisense.org.uk, a free medical education website. The simulator ran through a clinical scenario, specifically chest sepsis, with students choosing options to manage the patient and react to changes in observations. The scenario was developed specifically for new Foundation Year One doctors, and 23 FY1s were recruited to test the simulator. The doctors were recruited from the Medisense mailing list.

For evaluation, a pre-test was shown prior to accessing the simulator, and an identical post-test was required. Questions were based on the topic of sepsis management. Results of both tests were compared.

Results:
2.61% of respondents reported having had experience of both high and low fidelity simulation. Considering pre-test & post-test data, there was no statistically significant difference between pre and post-test performance.

Respondents scored the simulator an average 4.3/5 on ease of use, 4.17/5 on relevance to level of training and 3.91/5 on increase in confidence following use of PatientSim.

Respondents felt PatientSim improved their ability to identify high EWS & to manage a deteriorating patient, with marginal improvement on use of a structured approach & knowing to ask for help.

Users were then invited to participate in a questionnaire, which used Likert scale to assess the ease of use and relevance of the resource. Confidence in these domains was scored out of 5. This questionnaire also asked respondents about their experience with simulation.

Discussion:
This study demonstrates that this online patient simulator is easy to use and relevant, demonstrating improvement in confidence in several key domains. This study was limited in that the sepsis scenario featured was considered ‘basic’ by respondents. This may have impacted on confidence scores above. Average scores in pre-tests were high (3.6/4), which may add weight to this. Further study remains on-going, assessing the impact of this scenario on a medical student population, rather than this high-performing, simulation-aware group. Alternatively, adapting a more complex scenario with more in-depth pre and post test questions may yield different results.

References:

Ref: 081, Board: TT8
**Simulation for medical students: Video Facilitated Debrief - is there a benefit?**
N Yau, O Gokhale, N Stafford, M Natarajan
Swindon Academy, University of Bristol

**Background:**
The use of simulation is now widespread in medical education and has been embedded into the medical curriculum. Following simulation, a debriefing occurs which allows participants to purposefully reflect on their performance. It is regarded as the most important aspect of simulation as it maximises learning and enables behaviour change (1). Despite this, research into the best methods of debriefing has been limited at a medical undergraduate level. Our study was to investigate the value of using video to facilitate debriefing and to explore the views of medical students. We hypothesise that the use of video facilitated debrief is more effective than oral debrief and can help encourage reflection and potentially improve confidence of medical students.

**Methodology:**
Medical Students from Bristol University who have simulation teaching based at Great Western Hospital underwent purposive sampling. Video feedback was only played providing they added salient information or learning points to the debrief, and only a selection of videos were played, as opposed to playing the compete scenario. Consent was obtained for them to be recorded and for the videos to be replayed during the debrief.

Questionnaires using a point Likert scale and free text box, which was derived from a focus group to establish validity, was completed afterwards. Randomly selected students who did not participate in video facilitated debrief and received oral debrief alone will be used as a control group and also asked to fill the questionnaire. The questionnaires between video facilitated debrief and oral debrief will be compared statistically.

**Results:**
Preliminary findings from the focus group of 6 students in their 3rd year of training seem to suggest that students would find using video facilitated debrief more effective than an oral debrief alone. They felt that being recorded added no further stress to the simulation however thought it may be uncomfortable re-watching themselves. They feel that with the video, feedback can be more specific and can help them evaluate their own performance. Data collection is currently ongoing and full results will be presented.

**Discussion:**
We envisage that the use of video in a simulation debrief will help encourage students to actively reflect on their performance and aid with creating learning points.

**References:**
1) Issenberg S, McGaghie W, Petrusa E. Features an uses of high-fidelity medical simulation that lead to effective learning: A BEME systematic review. Medical Teacher. 2005; 27:10-28
Supporting supervision: The design of a novel online appraisal resource to monitor the progress and development of clinical teaching fellows

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Background:
The accurate monitoring and appraisal of Clinical Teaching Fellows (CTFs) by named supervisors has become an increasingly demanding task. A rising number of such fellowships are being undertaken and the responsibilities of these posts are continually expanding (1). The roles have grown to encompass medical research, securing postgraduate qualifications, pastoral duties and clinical work (2). Currently, there is no purpose-built online appraisal system specifically dedicated to assess supervisors in their assessment of CTFs. This is despite clear emphasis being placed upon revalidation and appraisal by the General Medical Council (3). Last year, the University of Bristol’s Gloucester Academy developed a bespoke CTF e-portfolio which now is in widespread use across the Severn Deanery as well as in other regions across the UK. Building on this success, the following project focuses upon developing a dedicated online appraisal system within the CTF e-portfolio. The system will be based upon a central webpage with numerous links, including one for each supervisee allowing for the documentation of their clinical and academic progress. As well as facilitating the assessment of CTFs, it will also provide a platform for the supervisor’s own continuing professional development.

Methodology:
Phase 1: Establishing the components of the appraisal system
Analysis of the existing foundation and medical e-portfolio assessor sites was performed to determine essential features required by the supervisor. Qualitative data was also collected from face-to-face interviews with current CTF supervisors.

Phase 2: Design and technology
Information gathered from phase 1 will be used to guide the development, design and production of the online appraisal system which will be created in partnership with the Gloucester University I.T. department. The system will be designed as an extension of the original CTF e-portfolio in terms of layout and ease of use. This phase will be completed in January 2017.

Phase 3: Piloting the online appraisal system
The pilot will commence within Gloucester Academy and then roll out to other academies within the UK currently using the CTF e-portfolio. Feedback will be collected regarding ease of use and whether supervisors find it meets their requirements. Amendments will then be made to produce a final version of the online appraisal system.

Results:
The final version will be available for inspection and further critique at ASME. Instructions regarding use will be discussed and its link with the current CTF e-portfolio explained.

Discussion:
Providing trainees with adequate supervision has been described as crucial in maintaining standards while also enhancing skill and knowledge (4). The online appraisal system is aimed at providing a consistent approach to the monitoring and appraisal of CTFs that will be user-friendly, time-saving and linked with the increasingly accepted CTF e-portfolio.

References:
Technology enhanced OSCE Marking for Advanced Practice Nursing MSc
RM Lundin, D O’Neill, M Kopczynska, B Sharif, T Szakmany
Welsh Digital Data Collection Platform / Cardiff University

Background:
The number of Advanced Nurse and Paramedic Practitioners in Wales is increasing since the introduction of the Advanced Practice Framework in 2011 by the Welsh Government. The student practitioners undertake advanced clinical skills, such as physical assessment and diagnostic reasoning to encourage students to apply their knowledge and skills. Registered students on the MSc course in Advanced Practice has increased at the University of South Wales from 19 in 2007 to 45 in 2014, increasing the complexity and time requirement of examinations rapidly.

Methodology:
This has led to investigation of the potential use of tablet based devices. Increased availability and decreased cost of android tablets with the availability of suitable software has made marking examinations electronically a possibility. Digital data collection offers increased security of data, automated calculation of pass marks and results, decreased marking time, significant reduction in use of printed paper and the possibility to give immediate feedback and results post-exams. 12 android tablets devices were employed from the free-to-use Welsh Digital Data Collection Platform (WDDCP). The platform runs Open Data Kit (ODK) on Tesco Hudl 2 devices.

Results:
This pilot study found no technical or security issues, all exams were easily marked by the examiners in a timely manner without data loss. Change over between candidates was extremely efficient, an experience emphasised when delays were experienced on return to paper marking for the resit period.

Discussion:
The pilot study showed promising results for the use of paper and digital data collection separately. The next step in development is to run both forms of data collection at the same time to look for exact changes in time spent marking and analysing the results during the May 2017 OSCE. Due to the similarities in examination process between the advanced practice OSCE and medical student OSCEs, the platform can easily be adapted to testing on medical students.

References:
http://www.weds.wales.nhs.uk/sitesplus/documents/1076/NLIAH%20Advanced%20Practice%20Framework.pdf [Date accessed 17/6/16]

Ref: 168, Board: T11
'Tips for New Docs': The use of a novel mobile application to aid transition between medical student & junior doctors
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Background:
Mobile applications are being used increasingly in clinical environments by healthcare professionals. The transition from medical student to junior doctor is recognised as a challenging process, with patient safety implications. There is little evidence in the literature focusing on the use of mobile applications to aid this transition via instructional content.
This study aimed to develop a mobile application for junior doctors in England, and evaluate its use and subsequent impact on trainee confidence.

Methodology:
A mobile application ‘Tips for new docs’ was to be developed, featuring instructional guides written by junior doctors, focusing on common ward based scenarios. Download data for the app was to be gathered via Google analytics and Apple App store. Focus groups would gather qualitative feedback from UK junior doctors on their use of the app.

Results:
The app was released on 19th July 2016, and hosted on Medisense.org.uk, a free online medical education platform, in addition to ‘Google Play’ and Apple’s ‘App Store’. The app was made available for free worldwide but specifically advertised in the North East of England. To date the mobile application has received 1850 downloads. The focus group established that the mobile application made new doctors feel more ‘comfortable’ and ‘at ease’. Moreover it was felt that the application helped improve user confidence managing complex jobs ‘out of hours’. A survey further reviewing user feedback remains on-going.

Discussion:
The study has found that mobile applications can prove to be popular amongst newly qualified doctors. Mobile apps such as ‘Tips For New Docs’ may play a role in improving user confidence by acting as an adjunct to local hospital ‘induction’.

Ref: 082, Board: TT12
Usage of additional learning materials accompanying a multiprofessional podcast
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Background:
Interdisciplinary collaboration is crucial in delivering effective care to elderly patients. Learning in health and social care settings is often not multidisciplinary in nature with many staff undertaking the majority of their undergraduate and postgraduate training with their professional teams. This leads to the development of profession-specific communities of practice, but may not help with the development of a community of practice focused on the comprehensive and collaborative care older patients require.
MDTea podcast has been developed to address this specific issue. We set out to use principles of co-construction in developing resources for the whole multidisciplinary team (MDT) to assist their learning about ageing.

Methodology:
The faculty have developed 20 podcasts over the past year, each developed with associated learning materials (referenced show notes and infographics).
Show notes are a written summary for each episode containing learning objectives, definitions, key points from the discussion, and references. Infographics provide a visual summary of key points for each episode. Both are available as a PDF to download from the website.
To ascertain the value and usage of the additional learning materials we developed a survey of listeners. This was sent out in electronic format to 222 people on the mailing list and the survey link was also placed on twitter. Simple analysis was carried out of survey responses and thematic analysis was used for narrative answers. Website data was interrogated to ascertain number of downloads and website visits.

Results:
There have been 44 responses to the survey so far, and 23657 downloads of the individual episodes. There were 4820 visits to the website and 1039 downloads of the show notes and infographics over the last 6 months.
73% of respondents had interacted with the show notes. 86% of these had viewed the notes on the website and 43% had downloaded them. 68% used the show notes for their own CPD, 21% as part of formal training of others, and 11% as part of informal training of others. 36% specifically cited the availability of references as an important part of their interaction with them.
51.5% of people had used the infographics with 44% of those people using them outside of social media (i.e. printing and putting on ward notice boards).

Discussion:
The MDTea faculty has developed a range of educational materials. The podcasts are the most accessed of these but the other elements are also interacted with and used as a valuable learning resource. The disparity may be explained by the location of the materials being on the website but many listeners accessing through podcast hosting platforms rather than through the website, which is a relatively less popular means of listening. In keeping with the quality indicators for podcasts (1) the availability of references is an important feature when assessing the credibility of the podcasts, and this should be borne in mind when designing accompanying materials. As respondents reported printing the infographics, it may be helpful to provide them in a format that is easy to print.

References:

Ref: 434, Board: TT13
International Medical Education

Using Technology-Enhanced Learning with Mini-GEMs to deliver geriatric medicine education in Africa
K Howorth, EG Lewis, C Dotchin, M Garside, J Stewart, S Urasa, K, Kajiru, R Walker, J Fisher
Northumbria Healthcare NHS Foundation Trust

Background:
Geriatrics teaching is absent in under-graduate and post-graduate medical training across much of Africa. This is despite an ageing population with increasing burden of chronic non-communicable disease and multi-morbidity. The challenge of equipping African doctors to provide better care for older people is compounded by a lack of specialists to deliver geriatrics education (1,2). A potential approach would be to harness a synthesis of technology-enhanced learning (TEL) and smartphone technology, since ownership of internet-enabled devices amongst junior doctors in Africa is high, and an appetite to use these for learning is recognised (3,4).

Mini Geriatrics E-Learning Modules (Mini-GEMs) are a TEL resource developed in the UK that aimed to complement existing geriatric medicine training in high-income countries (5). Evidence for the efficacy of Mini-GEMs within a developed country has previously been published (5), however TEL research in Africa is lacking. TEL has been used with some success for general medicine teaching of intern doctors in Malawi (6), however a recent review highlighted a paucity of TEL resources that addressed specialist topics (such as geriatric medicine) in Low and Middle income countries (LMICs)(7).

We therefore set out to develop a TEL resource to provide doctors in Africa with free, open-access, focused teaching on core geriatric medicine topics relevant to Africa. Within this work we aim to evaluate the uptake of the resource within the target audience and to appraise its efficacy.

Methodology:
Design and Dissemination
A series of video podcasts (Mini-GEMs) were developed for junior doctors, specifically those working in Africa. Four topic areas were covered: the ageing population, delirium, dementia and Parkinson’s Disease. Each provides a concise overview of the topic in relation to geriatrics in Africa. Approximately six minutes in duration, the resources consist of slides with an explanatory voiceover and hosted on YouTube. YouTube was chosen because of its ease of access, worldwide popularity, lack of cost and compatibility with a range of devices.

The slides and verbal script were reviewed by a senior registrar or consultant in Tanzania to ensure cultural appropriateness and applicability. The weblink to access the content is being disseminated by email distribution lists and hospital news webpages via key contacts at university teaching hospitals across Africa.

Evaluation
Evaluation will be via two routes. YouTube analytics provide quantitative data including numbers of views, duration of view, country accessed from and the type of device used. Secondly, each Mini-GEM will include a weblink to an online questionnaire allowing users of the content to provide feedback. The survey has been piloted with local colleagues and consists of a mix of open and closed questions – open questions will capture data pertaining to perceived usefulness, clinical relevance, and impact on clinical practice; closed questions will enable insight into the background of the learner (role and location). Questionnaire data will be reviewed and free-text answers analysed thematically.

Ethical approval has been gained from the Research and Development Department at Northumbria Healthcare NHS Foundation Trust and Newcastle University. Consent is assumed through choosing to complete the questionnaire and there is no incentive for involvement.

Results:
This study is currently in progress. Results will be available to be presented at ASME’s Annual Scientific Meeting in June 2017.

Discussion:
To our knowledge this will be the first instance of the development of a mobile E-learning tool for geriatrics education tailored to African junior doctors. We acknowledge that one of the barriers to implementation may be a low awareness of geriatric medicine amongst this target audience. Findings from this study may help to inform future TEL design and implementation in Africa and other LMICs.

References:


Ref: 060, Board: TT14
Utilising a wasted resource: An online platform for audience members to provide feedback to presenters at conferences
J Pearce
Hull York Medical School

Background:
People want more feedback, but often don’t receive it because of the time and resources required to provide it. At conferences, there is a potential wasted resource for providing feedback: the audience(1). There are a number of online platforms that could be utilised for facilitating audience members to provide feedback to presenters at conferences, an example of which is Padlet(2). As the creators explain, ‘Padlet is an Internet application that allows people to express their thoughts on a common topic easily. It works like an online sheet of paper where people can put any content (e.g. images, videos, documents, text) anywhere on the page, together with anyone, from any device’(2).

Methodology:
The National Foundation Doctors Presentation Day (NFDPD) is an annual conference where Foundation Doctors are invited to present research and audits they have undertaken(3). Prior to this years conference (NFDPD 2017), the webpage Padlet has been used to create an online platform for audience members to provide feedback to presenters. A homepage outlines the idea and lists the 22 oral presentations at the conference(4). Each presenter has an individual page, which is accessed from the homepage, where audience members can post feedback during the conference. The idea, and link for the homepage, will be shared with conference attendees via a page in the conference booklet, posters around the venue, email and twitter. The conference will take place on 13th January 2017. After the conference has taken place, the utilisation of the platform will be reviewed and feedback will be collected regarding the concept and the functionality of the platform via two online surveys; the first regarding the experience from the perspective of audience members (via the generic post-conference survey) and the second regarding the experience from the perspective of presenters (via a specific survey to be sent out alongside their collated feedback).

Results:
Data about the utilisation of the platform, feedback from audience members and presenters and the anecdotal experience of the platform from the perspective of conference organisers will be presented.

Discussion:
Presenters at conferences put a lot of time and effort into their work, but don’t always receive the feedback that they want and need to improve in future. We propose that utilising the time, knowledge and experience of the audience at a conference to provide feedback for presenters will improve the experience and learning for both parties. Feedback on the platform will be presented and used to improve the platform for future NFDPD conferences, and any other conferences that wish to trial the idea.

References:
**VCOG: Virtual Clinics in Obstetrics and Gynaecology**

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**Background:**  
The challenges of teaching medical students in the clinical environment are vast, especially with increasing demands on an already overstretched NHS. Technology enhanced learning has continued to increase within medical education to aim to bridge the gap between the classroom and the reality of the patient-doctor interface. Technology enhanced learning can take many forms and has been shown to be both effective and acceptable to students, especially when combined with tutor-led and clinical teaching. Student experience in clinic is very dependent on the clinician they are with and the time and clinical constraints within the clinic. We assessed students’ perceptions of fulfilment of learning objectives from attending traditional antenatal clinics and found there were several areas that they felt weaker in. We developed a pilot ‘Virtual Antenatal Clinic’ and asked students for their feedback which was very positive. We then continued to develop a full ‘Virtual Clinic’ to use with the students as an adjunct to their traditional clinical learning.

**Methodology:**  
Scripted consultations were videoed covering the major obstetric conditions that are within the obstetric undergraduate curriculum. Care was taken to ensure that the consultation followed the university guidance on content and consultation structure. A supplementary video for each patient was then recorded summarising the most relevant national guidance (NICE, RCOG). The aim of these videos was to capture the information that a motivated clinician would impart to the student if they were in clinic with them. The clinic package allows the student to select the patient in clinic they would like to “see” and then a free rein to watch the supplementary video. There is a link associated with each patient that allows the student to be directed to the most up to date published guidance for more detailed explanations. 5 MCQs were developed for each patient and the student can answer these and then reveal answers and explanations. A worksheet has been developed for each patient for the student to make prompted notes and create a revision aide.  
An electronic feedback form has been sent to the students to collect feedback on the virtual clinic.

**Results:**  
Immediate feedback from the students has been very positive. At the time of abstract submission only 8 students of 20 have completed ‘Virtual Clinic’ and returned their feedback. Of these 2 students rated the clinic’s usefulness as 7/10, 3 rated it as 8/10 and 3 rated it as 9/10. Students felt that they would use the clinic if they could access it online and felt that it improved their understanding of antenatal clinic and antenatal care. 100% found the video explanations and worksheets useful. 100% wanted to see virtual clinics in the same format in other areas of obstetrics and gynaecology and across other specialties. The written feedback included that the students would find access to the clinic useful for revision and OSCE preparation.

**Discussion:**  
At a time when obstetrics is becoming increasingly complex with women presenting in pregnancy with greater comorbidities, a simplified version of clinic will allow students to cement good first principles in obstetric history taking and assessment. This ongoing project has been positively received by students and will help more students see a good range of consultations and explanations for common and important obstetric presentations. The format allows the clinic to be navigated in a much less prescriptive way than many eLearning packages. It is aimed to be used as an adjunct to antenatal clinic so that students come to clinic with a good understanding of obstetric history taking to be able to tackle the more complicated patients that they will see in real clinical situations. We will continue to evaluate the clinic with each rotation of students and are also developing virtual early pregnancy and gynaecology clinics. Once evaluated and validated we aim to have these clinics online as accessible resources.

**References:**  
Whatsapp: Can we use it as a teaching tool? An innovative use of social media to enhance surgical teaching.
C Allen, J Bhogal, B de Souza, S Singh
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Background:
The use of smart phones and social media amongst healthcare professionals is increasingly prevalent 1. In our current practice we use the phone messaging app ‘Whatsapp’ for organisational purposes. Rightly so, there is reluctance over concerns for patient confidentiality that prevents its widespread use as a clinical tool. However, there is evidence that its use can be beneficial to learners 2, offers a different method for learning and has the potential to be used in more clinical ways 3. There is little evidence in the use of ‘Whatsapp’ as more than an organisational tool amongst undergraduate learners. The aim of this study is to assess the use of an interactive teaching group on ‘Whatsapp’ to augment the existing surgical teaching programme for medical students.

Methodology:
We carried out a focus group with 15 Year 3 students starting their surgical placements at a Teaching campus hospital of Imperial College, about their use of social media in the workplace. We discussed the use of social media to potentially improve their surgical teaching. Following this we set up a voluntary ‘Whatsapp’ group and used it to generate discussion amongst the group on surgical topics mapped to the curriculum. At the end of the placement we gathered feedback via a questionnaire from the students using Likert scales. This has been repeated with the sequential cohort of students on the following attachment.

Results:
In the first cohort, 14 students signed up to use the group. 8 students posted regularly. 11 took part in the end of placement questionnaire. The majority (90%) of students found it useful as a purely organisational tool. As a discussion forum, the feedback was more mixed, with some individuals engaging well and finding it useful and others (36%) stating they found it less beneficial than other methods of teaching they took part in during their attachment. The results from the second cohort will also be presented.

Discussion:
Engaging students in new methods of teaching can be challenging. There has been work done on how engage students in various education processes 4, as well as the reasons why they may not engage in the desired way 5. We believe that the ‘Whatsapp’ group has the potential to be of educational benefit to students as a discussion forum, particularly as a way of reinforcing knowledge picked up from other teaching methods. However the mixed feedback from them suggests a proportion did not feel it was useful in that regard. Student and tutor engagement and enthusiasm are key elements to the success of the group. Whether such a tool has additional learning benefits, and which elements are important requires further study.

References:
5. Davidson, Bernard ; Gillies, Ralph A. ; Pelletier, Allen L. Introversion and Medical Student Education: Challenges for Both Students and Educators Teaching and Learning in Medicine, 02 January 2015, Vol.27(1), p.99-104
Diversity in medical education: 
about people, for people, by people