Innovative, Interesting & Prize Winning Work

**Education Innovation Award Winners 2017**

Virtual Immersive Clinical Simulation
V Taylor-Jones
P Duvall

Thursday 12th July
4.05-4.45 Sage 1

Not just a medical student – an inspirational and empowering education video series
N Abbas

Thursday 12th July
4.05-4.45 Sage 1

**Educator Development Award Winners 2017**

Lego – Serious play in medical education
C Thomson

Thursday 12th July
4.45-5.25pm Sage 1

Thin blue line: policing empathy and whistle-blow learning
F T Pender

Thursday 12th July
4.45-5.25pm Sage 1

**Abstract Submissions: Innovative & Interesting Work**

Cultural variation in attitudes to collusion in end of life care: a survey of medical students in Malaysia and the UK
S Holmes

Thursday 12th July
5.25-5.55pm Sage 1

Sparkling Moments: Using graphic medicine to enhance appreciative enquiry in case based discussions
N Amin

Thursday 12th July
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**Best Original Research Paper Award (BORPA) Finalists 2018**

Integrating a novel assessment of discharge summary writing into a final-year medical student curriculum: an evaluation of process and outcome.
E M O’Hare

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Medical students’ motivation to respond to professionalism lapses of peers and faculty
M Mak-van der Vossen

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Re-thinking professional identity: Introducing ‘interprofessional responsibility’ as a lever for effective inter-professional education
V Joynes

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**Small Grants Awards 2017**

‘Not a doctor’: physician associates (PA) and professional identity formation
C Morris

Wednesday 11th July
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Student experiences and staff perceptions of the primary care placement in the Physician Associate programme at a UK Medical School
R Hoggins

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The Impact of Clinical Team Networks on Multi-Source Feedback Assessments for UK General Practitioners: A Social Network Analysis

JASME Sir John Ellis Student Prize 2018 - Intercalated
Who do you think you are? PA student perceptions of professional identity formation
H Preston
Wednesday 11th July
2.00-2.40pm
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JASME Sir John Ellis Student Prize 2018 - SSM
Video-based Virtual Patient Journeys: Narrative, first-person videos as a novel teaching aid for students
J Salem
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New Leaders Award 2018
NHS England National Social Prescribing Student Champion Scheme
BC Giurca
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**Mixed methods research for implementing the WSLA integrated learning model in Health Science Degrees**


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### Clinical Skills

**Can undergraduate students improve their likelihood of undertaking intimate examinations?**

D Cahill, A Armitage

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**Evaluating the initiation of practical clinical skills training during the first year of medical education**

J Seale, M Knoetze, A Phung, C Butchers

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**Providing “the perfect way to feel safe whilst practising examination:” Using male clinical teaching associates to teach intimate examinations**

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**SECO: An innovative approach to clinical decision making in physician associate education.**

H Millott, E Storr

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**Starting practice out of practice: concerns with undergraduate Urology education**

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**Whole simulated consultations in primary and secondary care; an exploration of their impacts on final year students’ self-efficacy.**

M Bartlett, R Kinston, A Panesar, N Roberts, R McKinley

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**Why are certain doctors referred for Fitness to Practice investigations?**

A Medisauskaite, P Crampton, L Mehdizadeh, A Sturrock

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**Empathy, fake empathy & how to make the empathetic statement - the views of simulated patients**

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- A Massawe
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## Inter-Professional Education

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A Alao  
H Alberti  
D Kennedy  
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S Hrisos  
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F Speyer  
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<td>What Factors Are Critical to Attracting NHS Foundation Doctors into Speciality or Core Training: A Discrete Choice Experiment</td>
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### Practice Based Teaching And Learning

**A cross-professional study of interprofessional learning, support and feedback - in first-year junior doctor trainees and newly-qualified teachers.**

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<td>Bleep the Trauma Scribe! Truro Trauma Scribes: A Pilot Scheme Recruiting Undergraduate Medical Students as Major Trauma Scribes.</td>
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### Professionalism

**Location, Location, Location: Capturing GP Bashing in the Northern Region**

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**Are efforts to attract graduate applicants to UK medical schools effective in increasing the participation of under-represented socioeconomic groups? A national cohort study.**

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### Teaching About Specific Subjects

**A Widening Participation course utilising Emergency/Acute Medicine in high fidelity simulations improving insight, motivation, and confidence when applying for an undergraduate career in healthcare**

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Virtual Reality Fully Immersive Interactive Technology. Can this enhance simulation training and reduce skill fade?

T Judd
N Cook
I Hunter

Virtual Reality Fully Immersive Interactive Technology. Can this improve medical students' preparedness for resuscitation?

T Judd
N Cook
I Hunter
EDC Education Innovation Award 2017: Virtual Immersive Clinical Simulation
V Taylor-Jones - Honorary Senior Lecturer and Lead for Simulation, Paul Duvall - Director of Technology Enhanced Learning
University of Liverpool School of Medicine.

A simulation-based approach to medical education provides a powerful pedagogical strategy enabling effective practice in realistic clinical situations without impacting on patient safety\(^1\). It provides a safe environment where mistakes can be made and understood, resulting in the facilitation of genuine reflection and learning\(^2\). Although this is an excellent approach, it means that a large cohort of medical students may have restricted exposure to simulation, as it requires significant logistical and financial investment. Liverpool’s intake is going up to 375 students. Furthermore, Ericsson’s work on deliberate practice\(^4\) would suggest that repeated exposures to a cognitive or psychomotor skill allows better performance of that skill.

At Liverpool, collaboration between Learning Technologists and simulation experts allowed us to explore the question: how can we provide repeated exposures to simulated clinical experiences using novel technologies? Our students’ feedback regarding simulation describes a rich experience, combining clinical skills, information gathering, decision making, communication skills and role-modelling to name but a few cognitive and practical skills. The effective use of technology can produce sustainable and efficient additional educational methods allowing greater student experience with this array of skills. The emergence of new affordable Virtual Reality technologies combined with the ubiquitous presence of high quality smartphones, in student’s pockets, presents a new opportunity.

360-degree filming can now capture a panoramic clinical environment and allow an observer to witness an entire complex scene as it plays out in real-time. In our pilot project conducted in May 2017, we collaborated with University of Liverpool PhD student Michael Verity’s company REAL SPACE LTD with multimedia Manchester Metropolitan University’s PhD student Peter Woodbridge to create highly realistic, immersive simulation scenarios. We designed the scenarios to deliver learning objectives based on 3rd year MBChB curriculum. We focused on clinical knowledge plus demonstrating the interaction between healthcare teams, communication skills, decision making, leadership and followership in emergency clinical situations.

“Fish-eye” view of an epistaxis scenario
The development of these films used surprisingly simple technology using Samsung mobile phones, the Samsung 360 camera which is available on the high street for less than £300, and some radio microphones clipped to the actor’s clothes. The post production editing and sound was done by REALSPACE LTD in just 2 days.

We have trialled these films in a lecture theatre format, showing the content in a “fish-eye lens” view which allows the audience to see a 360-degree view of the clinical environment. We aligned each session to the learning objectives of the students’ lecture-based content, so showing a film about chest pain during the 3rd year MBChB cardiovascular week. We utilised interactive voting technology during the lectures to ask the students questions about the scenario, utilising a debriefing style. The students responded using PollEverywhere™ on their mobile phones in both multiple choice and free text formats, allowing a broad discussion about the learning objectives to occur. The immediate feedback was very positive.

“The format of this lecture was by far the most effective delivery of information I’ve seen so far. Instead of being talked at for 45 minutes - exposure to the real life situation deepened the experience, and the interactivity kept all heads off desks.”

“Following your lecture today I wanted to say that I felt it was an excellent and interactive learning experience. My friends and found it very valuable and look forward to your sessions in the future. Online resources/videos would also be greatly appreciated.”

“Thank you for your lecture it was great, I felt I learnt a lot and it was as a result of the quality of the videos especially the unique perspective afforded by the lenses. I think it was enhanced by the polls making me question what was the right thing to do, it made me think”

The real value of the 360-degree view, however, is utilising a virtual reality headset and feeling immersed in the clinical environment in which the scenario is taking place. The headset allows you to move your head to look at the scene around you and feel truly immersed in the scenario which you are viewing. The development of this technology, and the positive feedback we have received when we give the students a headset to use, has allowed our organisation to develop more 360 filmed content. We are currently working with students from across the clinical years to develop student-led content across a variety of clinical specialities.
The EDC Education Innovation award will allow our small team to develop on-line learning packages utilising the 360-degree footage, and purchase some virtual reality headsets to trial with the students own mobile phones, inside the headsets. We would like to give a cohort of students unlimited access to simulation-based content, in order to repetitively engage and practice cognitive skills such as decision-making. We would like to create an element of interactivity with these learning packages using software to overlay text / MCQs / graphics / polls on the videos, which allow students to see additional content such as ECG’s and blood results, answer questions about what they are seeing, and see how their peers would react to situations.

Finally, we would like to evaluate the student’s experience of utilising immersive clinical simulation, with a view to developing a pedagogical research project evaluating its effectiveness in preparedness for practice.

References
EDC Education Innovation Award 2017: NOT JUST A MEDICAL STUDENT: An innovative medical education video series to inspire, engage and inform tomorrow’s doctors
Nadine Abbas, Year 4 Medical Student, Southampton Medical School

To inspire tomorrow’s doctors to be creative, there is a need to engage them with latest innovations, technology and conferences within various specialties. However, currently these themes are scarcely covered in the timetabled medical curriculum.

With the rise of the social media generation, using new innovative methods to engage students should be explored further adding to the continuous evolvement of medical education.

I therefore created and launched in August 2017 an innovative bite-size medical education video series that has gained traction quickly with over 900+ followers on Facebook called ‘Not Just a Medical Student’ reaching and enhancing medical students experience across the UK. It seeks to INSPIRE, ENGAGE and INFORM tomorrow’s doctors with videos that are strictly under 3 minutes, like none before.

With videos shot in surgical theatre with the founder of Virtual Reality surgery, reviewing how medical education may drastically and positively evolve in the future, to the HQ of multi-million pound medical apps such as Babylon Health and Touch Surgery reporting on the latest medical education and health apps. We’ve engaged in topical medico-politics at the British Medical Association House and reporting on global health issues and innovations at the Royal Society of Medicine Conference.

As we showcase these innovations we leave inspiring and engaging messages for students to take away. Not only do we benefit learning from these events and inspirational leaders but every single student who watches our videos. We already have had students feedback being inspired to create their own innovations.

6 videos have thus been released on Facebook such as:

- ‘How to learn surgery on a train’ - Exploring learning surgery from an app (4.5k views)
- ‘An end to boring hospital placements?’ - Exploring innovations from King’s College London created from current generation of students and junior doctors (4.9k views)
- ‘Why is this still happening in the 21st Century?’ - Reporting on maternal deaths across the globe and the latest technology set to make a difference (2k views)
- A personal account and tips on how to publish from a medical student who managed to gain 16 publications throughout his medical school (2.5k views)
- ‘Will Virtual reality forever change medical education?’ (2.4k views)

It highlights that there is an obvious need and appetite for inspiration amongst students via innovative methods found outside of the medical curriculum.

Through collaboration, the videos feature medical students from various medical schools such as Imperial College, King’s College London, University of Exeter and Southampton.

We were lucky enough to recently win an award at the Alternative Docs Conference 2017. Having presented the series to the Board of Norwegian doctors, they have invited me to Norway to showcase the series and hold a workshop for a conference.

The Award would be extremely beneficial in allowing us to continue the video series by covering travel cost and equipment to create these videos.

Personally, in my future as a doctor, I would very much like to further my interest in medical education by continuing to find innovative ways to continue to teach medicine. The video series has immensely enhanced my passion for medical education already.
How did ‘Not Just a Medical Student’ come about?

As a medical student, I have felt that taking forward an idea or an ambition can sometimes feel impossible. The amount of times I told someone those intentions then felt my heart sink as I state, “...but, I’m just a medical student”.

At this point the listener usually empathetically nods in agreement, as I add this ambition to the list of what I want to achieve in that distant nebulous future, after I graduate.

On one occasion, however, I was surprised to find someone respond rather enthusiastically: “but you’re not just a medical student”. That moment resonated with me and has stuck with me ever since.

As hard as it is to believe, we are not just medical students.

And thus the ‘Not Just a Medical Student’ Video Series was born.

Therefore, if six words, “you’re not just a medical student” can inspire me to undertake a project such as this, what can a whole series of inspirational medical educational videos do for everyone else?

On social media:
Twitter: @NotJustaMedSt
Facebook: fb.com/NotJustaMedicalstudent
Youtube (backupchannel): youtube.com/NotJustaMedicalStudent

Thursday 12th July, 4.05-4.45pm, Sage 1
EDC: Educator Development Award 2017 Winner: Introducing LEGO® Serious Play® into Medical Education
C Thomson, QUB

Following an experience of LEGO® Serious Play® during the distance Digital Education MSc programme at the University of Edinburgh, Clare Thomson introduced a strand into the medical education curriculum. There is growing interest in this methodology in other fields, where LEGO® is used as a mediator, allowing complex conceptual ideas to be built (James, 2013; Nerantzi & Despard, 2014). Workshops are inherently safe, tactile and fun for participants, with individuals/groups sharing and developing their learning. To date a successful programme has been established with first-year medical students for the topics of professionalism and reflective practice. Sample student feedback:

“The lego workshop was particularly memorable and useful for reflecting on medicine as a career and our expectations for the remainder of our university time. Through play people seemed to open up a bit more about their personal motivations and how they see themselves - it was interesting.”

“Before starting medicine I was quite nervous, the LEGO workshop allowed me to easily meet and begin to build friendships with individuals in my year group in a relaxed and fun atmosphere. Whilst also getting to meet one of my lecturers, gain knowledge on eportfolio and practice skills of communication and teamwork.”

Outwith the undergraduate medical curriculum successful workshops have also been delivered at the INMED 2017 conference in which medical educators reflected on developing their capacity as researchers and the Queen’s University annual Teaching and Learning Conference 2018, where educators across the institution explored creative teaching methods.

The ASME EDC Educator Development Award allowed the team lead to attend LEGO® Serious Play training in London in May 2018. This four-day intensive workshop resulted in facilitator certification and an additional toolkit to widen the applications of the methodology. The outputs will also feed into the coming year’s Welcome Week activities activity design to provide a stronger link in students’ minds between their metaphorical models and their future reflective practice skills as students and doctors.

Future plans include working with the School of Medicine, Dentistry and Biomedical Sciences Gender Equality Office to plan workshops and exploring possibilities for research with the Postgraduate School within Queen’s.

References:

EDC: Educator Development Award 2017 Winner: Thin blue line: policing, empathy and whistle-blow learning
F T Pender, Edinburgh Medical School, Little France, Edinburgh EH16 4SB

The demise of empathy
The relationship between physician empathy and patient health and well-being is widely known; it develops the capacity to share and understand the patient’s standpoint more fully resulting in significant personal and therapeutic benefit. The lack of empathy among physicians and the decline in explicit teaching of empathy in medical education is therefore concerning. A recent challenge was issued that an evidence-based empathy teaching model in medical education be developed. In response to this call, it may be useful to look outside medicine to help inform the model. This paper captures the perspectives in policing education where empathy is delivered in context.

Development of empathy in young doctors
Students entering the medical profession are essentially scientists and may risk becoming practitioners concerned more about the disease of a patient; the so called detached concern model may result in treating the patient as a collection of symptoms. Problem based learning (PBL) offers significant promise in not only connecting the students with the sciences but also in fostering empathy; the case scenarios used in PBL including unambiguous reference to empathy.

Empathy and policing education
Promising work in the U.S, where accounts of poor public confidence in the behaviour of police officers, has been reported [Boston marathon bombings in 2013] and the concept of developing a more community-oriented policing accepted. The response was to use PBL in national police training with the intention of improving empathy of cadets and thus improve their street credibility.

Empathy and the connection between medical practitioners and policing
The processes involved in the encounter between a medical practitioner and patient, and the police officer and member of the public, is remarkably similar. The relationship has parallel ambitions: to engender confidence and provide reassurance. Effective communication is central to the encounter; empathy guides the interaction.

Approaches to teaching empathy
Small group teaching may assist a learner in first recognising and then reinforcing the composite skills of empathy, including communication with, and dealing with responses from, the patient. PBL offers promise in developing the empathy curriculum; the lecture may not.

The challenge for teaching empathy
The movement from a conflict to a public service model in policing education [US] has been accredited to a shift in learning towards PBL and the whistle-blow learning scenarios resulting in an empathic professional. The challenge for curriculum developers is that the development of empathy in medical students should not be left to chance and the hidden curriculum but more explicitly taught.

References

Resources
http://med.monash.edu.au/cehpp/altc-empathy/
https://www.youtube.com/watch?v=a2QjseE1akw

Thursday 12th July, 4.55-5.25pm, Sage 1
EDC: Innovative & Interesting Work: Cultural variation in attitudes to collusion in end of life care: a survey of medical students in Malaysia and the UK
S Holmes, W Finch, A Gilhespy, C Christopher
Newcastle University

Background:
Collusion in healthcare is the act of withholding information from the individuals involved. Across a range of cultures, collusion is extremely common in end of life care: up to half of patients in India receiving cancer treatment are unaware of their diagnosis [1]. Although the practice of collusion is well documented, there has been limited exploration into the attitudes underlying it or into its implications for globalised medical education. Newcastle University offers rich potential for cross-cultural insight in delivering a standardised medical degree at campuses in the UK and Malaysia. We harnessed the diversity of our two student populations in order to explore cultural attitudes. As part of a mixed methods study, the survey reported in this abstract determined and compared students’ attitudes in three areas. Do medical students think collusion is morally justifiable? What factors do they feel underpin its practice? How do they intend to navigate this area on starting work as a doctor?

Methodology:
Our study used a mixed-methods approach. To generate areas for investigation, we conducted three small student focus groups exploring perceptions of collusion. Following content analysis of these discussions, a questionnaire was developed to survey the prevalence of these attitudes in the student populations in Malaysia and the UK. The questionnaire was distributed to all final-year medical students at Newcastle University Malaysia's campus in June 2017 and to all final-year medical students at the Newcastle-upon-Tyne UK base unit in December 2018. The response rate was 84% in Malaysia (78 of 93 students) and 71% in the UK (69 of 97). The questionnaire asked students to state how far they agreed with statements about collusion using a 5-point Likert-scale from “strongly disagree” to “strongly agree”. Analysis of statistical significance was performed using the chi-squared test. Participation was voluntary and ethical approval was obtained from Newcastle University.

Results:
Students at both campuses agreed that collusion is not in patients’ best interests (78% of students in Malaysia (p=0.05) and 91% in the UK (p=0.05)). Both groups felt strongly that patients should have the right to decide whether they are told their diagnosis or not (93% in Malaysia (p=0.05) and 98% in the UK (p=0.05)) and that most patients want to know the truth about their diagnoses (79% in Malaysia (p=0.05) and 88% in the UK (p=0.05)). However, students in Malaysia differed widely from the UK in their expectations of practice. 64% of students in Malaysia reported that relatives are told a diagnosis before the patient, compared to only 2% in the UK (p=0.05). 58% of students in Malaysia would withhold information from a patient if asked to do so by their consultant, compared to 30% in the UK (p=0.05). These findings demonstrate a clear conflict for our students in Malaysia between their ethical framework and their expectations of practice. In line with these observations, only 25% of students in Malaysia feel prepared to respond to requests for collusion from patients’ families (p=0.05), compared to 42% in the UK (p=0.69).

Discussion:
Our study demonstrates that collusion presents significant challenges for globalised medical education. Many students do not feel prepared to navigate this area in practice. There is a clear potential for conflict between students’ personal beliefs, formal training and cultural expectations. As immigration and globalisation lead to an increasingly interconnected world, it is vital that we equip doctors to practise effectively across cultures [2]. We advocate increasing investigation into areas such as communication skills where attitudes and practice are culturally determined. This research will be invaluable in shaping support for healthcare professionals transitioning across geo-political regions and in informing the provision of international medical education.

References:

Thursday 12th July, 5.25 – 5.55pm, Sage 1
EDC: Innovative & Interesting Work: Sparkling Moments: Using graphic medicine to enhance appreciative enquiry in case based discussions

N Amin, L Miller
Health Education England

Background:
“Burnout” (Maslach & Leiter 2008) is increasingly prevalent amongst physicians and more amongst specialty trainees as they face increasing levels of workplace stress. It is defined as a “psychological syndrome in response to chronic interpersonal stressors on the job.” Maslach identified 3 elements of burnout, cynicism, exhaustion and reduced self-efficacy. This teaching tool has been developed to encourage appreciative enquiry in clinical supervision in order to develop a more balanced perspective within clinical supervision. The “Graphic Medicine” (Williams 2014) genre is used to explore the emotional burden of health care that challenges the epistemic injustice, which stigmatises physician health and their clinical practice. Graphic narratives from healthcare professionals are an asset for the “resilience movement”, the “contemporary endeavours in bio-medical self-management, prophylaxis, and prevention” of clinician burnout. These give voice to “wounded healers” and comment on national healthcare systems with their flaws in failing to care for the carers and impacting patient care. Graphic narratives of care are emancipatory and subversive in challenging unilateral demands of traditional “care ethics” on carers and redress the absence of the carer voice. Recognition of carer personhood benefits all, encouraging a “mature care ethic” (Pettersen 2011)

Methodology:
The methodology is action research with thematic analysis is based on a workshop designed by L. Miller to offer an alternative tool in clinical supervision. Workshop learning objects are Understand the importance of reflection on positive aspects of our work, “sparkling moments” not just challenges To have a greater awareness of how pervasive graphics are in our society and global. The participants are working in small groups of between 4-5 members and are invited to consider a patient interaction that they defined as a ‘sparkling moment’ which is defined as a clinical encounter that generated feelings of positivity. The group is offered brief instruction on graphic medicine and they are asked to make a cartoon of their ‘sparkling moment’ using the guidance provided. Once they have their cartoon they are asked to present the case to the group. The group is then asked to offer observations both about the story and the cartoon starting with ‘I appreciate...’

Results:
Workshops: two with GP specialty trainees, two with paediatric specialty trainees, three with postgraduate Physicians at conferences. Total number of participants > 250. Themes arising from the cartoons are Going the extra mile Mastery of medicine Being valued Small acts of kindness Feeling good (fun valued appreciated Having time to reflect - the wonder and privilege of medicine The level of emotion that can be captured even with stick figure The participants use of appreciative enquiry was experienced as unfamiliar by the participants and reflected in the evaluation which suggest it is an area for further exploration

Discussion:
The Graphic genre has been used to explore difficult subjects and Dr Ian William’s novel ‘The Bad Doctor’ exemplifies how it can be utilised to communicate the emotional narrative of physicianhood and personhood. It has been adapted as a tool for case based discussion between clinical supervisor and supervisee. The art of story telling through cartoons requires basic skills in drawing and it is evident that participants found the use of colour and drawing freeing up their imagination whilst communicating their stories. The appreciative enquiry tool enables the supervisor to get below the surface in order to explore how a doctor might feel about their case in a safe and supported way as well as the supervision being formative. The use of appreciative enquiry needs further investigation but the experience and evaluation form participants to date suggest this methodology of supervision offers an opportunity to learn ‘mature care ethics’

References:
ERC BORPA Finalist 2018: Integrating a novel assessment of discharge summary writing into a final-year medical student curriculum: an evaluation of process and outcome
EM O’Hare, T Collett, J Archer
Plymouth University Peninsula Schools of Medicine and Dentistry, England.

Introduction
The transition of a final-year medical student to becoming a doctor is a notoriously challenging time, with well-documented negative connotations for patient safety and junior-doctor well-being.\(^\text{[1-4]}\) Following evidence correlating these transitional problems with new doctors feeling inadequately prepared for work,\(^\text{[5]}\) the past decade has seen a considerable expansion in research studying new graduates’ “preparedness” for practice.\(^\text{[6]}\) Key recommendations for enhancing preparedness have included increasing opportunities for undergraduate experiential learning\(^\text{[7]}\) and, more recently, the introduction of various transition interventions which are conducted prior to commencing practice.\(^\text{[6]}\) These comprise both general interventions such as student assistantships, shadowing and induction, and skill-specific interventions which help with a particular aspect of the foundation doctor role, such as prescribing.\(^\text{[6]}\)

Concurrently, the transition of a patient from hospital to home is also a time of instability and the potential for patient harm, with poor quality documentation in the patient’s discharge summary (DS) cited as a major contributor to poor patient outcome.\(^\text{[8]}\) The DS is an important written synopsis of a patient’s stay in hospital, and an essential means of communicating pertinent information about their treatment and follow-up upon transition to the community. The majority of these documents are written by foundation doctors who receive little guidance in how to perform this task,\(^\text{[9]}\) and it would seem that few are required to demonstrate competency in this area prior to graduation.\(^\text{[10]}\) Despite the widespread introduction of electronic pro formas to standardise these documents, mistakes in the DS are prevalent and may adversely impact patient safety.\(^\text{[11]}\) There is limited research from outside of the UK to suggest that educational interventions may improve the quality of DSs, however these studies have been conducted exclusively within a postgraduate setting.\(^\text{[12-19]}\)

Therefore, the principal aim of this study was to explore the impact on final-year medical undergraduates of undertaking a new skill-specific transition intervention, which took the form of a longitudinal portfolio-based assessment of student-written DSs. Given an identified paucity of research regarding the creation of DSs let alone the instruction and assessment of this skill, the research question was “Can a novel undergraduate assessment inform us of the process of writing discharge summaries and prepare final-year students for practice?”.

Methodology
As this was an exploratory study which evaluated the impact of a new intervention, a qualitative approach was used owing to its perceived suitability for unearthing in-depth information about topics where little or no knowledge exist.\(^\text{[20]}\)

Students were recruited to pilot the “Discharge Summary Portfolio” (DSP) assessment over the course of their final year. Participants were required to collect a sample of anonymised DSs that they had written under supervision during their ward placements, and write about their experiential learning at the end of the year in a reflective essay. Following DSP submission, a focus group was held to explore participants’ experiences of writing DSs and piloting the assessment. This was audio-recorded and transcribed verbatim. Sources of qualitative data included each of the student essays and the focus group transcript. These were analysed inductively for emergent themes.

Findings
Overall, the qualitative analysis suggested that the DSP was well-received and helpful. Five overarching themes were identified within the data: Variability, Uncertainty, Temporality, Logistical Issues and Personal Gains. The first theme Variability, related to the distinct variation in students’ experiences of DS-writing in terms of how they learnt this skill, their supervisor writing styles, the content requirements and writing opportunities afforded by different specialties, and patient characteristics.

Uncertainty pertained to students’ descriptions of considerable uncertainty with inputting discharge medications, determining DS content and dealing with unspecified diagnoses.
Temporality, related to the students’ perceptions of DS-writing as a time-intensive task which was expected to impact their time-management as doctors.

Logistical Issues referred to the frequent practical challenges students encountered which were purported to affect both the pilot and the wider discharge process.

Within the final theme, the students described several Personal Gains from undertaking the DSP, including motivation to practise DS-writing, increased awareness of important aspects of the DS and the discharge process, as well as the relevance of taking part on their future clinical practice.

Discussion
This paper proposes a new skill-specific transition intervention in the form of an assessment of DS-writing, which is considered to be lacking in many undergraduate curricula. The findings highlight the variable, uncertain and time-pressured nature of the clinical environment, which is often beset by a number of practical challenges. These organisational contexts can impact the process of DS-writing as well as the wider process of hospital discharge. This research proposes that acknowledgment of these contextual influences through undertaking the DSP will help students feel more prepared for writing DSs in practice. Given the pervasiveness of these organisational contexts, researchers developing future clinical transition interventions are encouraged to make room for them within their study design, or at the very least recognise their presence.

References
ERIC BORPA Finalist 2018: Medical students’ motivation to respond to professionalism lapses of peers and faculty

M Mak-van der Vossen, VUmc School of Medical Sciences Amsterdam, the Netherlands; A Teherani, University of California San Francisco, USA; W van Mook, Maastricht University Medical Center, Maastricht, the Netherlands; G Croiset, VUmc School of Medical Sciences Amsterdam, the Netherlands; R Kusurkar, VUmc School of Medical Sciences Amsterdam, the Netherlands

Introduction
As physicians’ unprofessional behaviour can compromise patient safety, each physician should be willing and able to respond to professionalism lapses. Although students endorse an obligation to respond to lapses, they experience difficulties in doing so. It is still unclear what motivates students to overcome these difficulties. The Expectancy-Value-Cost model of motivation can help to understand students’ choices on why to engage in responding to professionalism lapses. The model describes that a person’s motivation to engage or not engage in a certain task is based on the balance of the expectancy of being successful in that task, the perceived value of engaging in the task and the cost of engaging in the task. Knowledge about students’ motivation to respond will allow educators to support students responding to professionalism lapses. The aim of this study was to understand students’ motivation to respond or not respond to professionalism lapses of peers and faculty.

Methods
We conducted an explorative, qualitative study using thematic analysis to code transcripts of semi-structured interviews. We purposefully sampled 18 student representatives convening at a medical education conference. We specifically sampled student representatives, as we expected that interviewing these proactive students would yield a wide range of possible responses, assuming that their experiences would reveal outcomes that could be transferred to the wider student body.

The first step of the coding process consisted of independent open coding of two transcripts by three investigators, followed by discussion, leading to an initial set of codes. This set was used to code all transcripts, discussing difficulties with each other, thus generating a thematic map of the analysis that was applied to all transcripts again. The last step included the use of sensitizing concepts: general ideas that suggest different directions to see, organize and understand the experiences of participants. Participants’ remarks were mapped to the concepts expectancy, value and cost, coming from the Expectancy-Value-Cost model of motivation.

Results
Students’ responses to the lapses of faculty and peers were: avoiding, addressing, reporting, or initiating policy change. We were able to map all codes regarding motivation to respond/not respond to the sensitizing concepts expectancy, value and cost. Each of these concepts appeared to be influenced by (inter)personal and system factors.

Expectancy: Responding was expected to be successful if the student saw him/herself as an assertive type, if a good relationship had been established with the observed person, and if a feedback-giving culture existed in the medical school. Responding was expected to be less successful if the observed person was angry or defensive in her/his reactions. An existing hierarchy between the student and perpetrator made responding difficult.

Value: Students described (inter)personal factors as feelings of responsibility for their own education and the education of other students. They described system factors as feelings of responsibility for the well-being of patients, or the reputation of the profession as a whole.

Costs: Students did not want to be seen as a troublemaker, a whiner or a tattletale. As such, students worried that relationships could be damaged. Students feared personal retaliation which might affect their academic grades, their education and their future. Costs of responding to behaviours of peers were perceived lower than responding to behaviours of faculty. Costs were also perceived to be lower in case of a collective response.

Discussion
The Expectancy-Value-Cost model effectively explains students’ motivation to respond to lapses. Our addition to this model is the distinction of (inter)personal and system factors for each of the three sensitizing concepts expectancy, value and costs. (Inter)personal and system factors are modifiable and can be used by medical educators to enhance students’ motivation to respond.
Expectancy: Responding to unprofessional behaviours can be taught in medical school to provide students with the skills to do so. The expectancy of success can be improved if faculty members are approachable and the school has a feedback culture.

Value: Value factors were not the most important barriers we found, but could nevertheless be positively modified by providing students the knowledge base of professionalism. Also, professionalism values should preferably be discussed among teachers and students to obtain bidirectional alignment.

Costs: Costs can be mitigated by making the task of responding easier. This is realized when students feel support from the organization, e.g. the possibility to bring their concern to a student council or a faculty member instead of acting themselves.

Conclusion
Student representatives respond to an observed professionalism lapse of a faculty member or peer student by avoiding, addressing or reporting the lapse, and/or by initiating policy change. The balance of expectancy of success, value and cost determines which response is chosen. Expectancy of success, value and cost all three appear to be influenced by factors on (inter)personal and system level. Medical educators can use these factors to enhance students’ motivation to respond to the professionalism lapses they observe in medical school.

References
ERC BORPA Finalist 2018: Re-thinking professional identity: Introducing ‘interprofessional responsibility’ as a lever for effective inter-professional education

V Joynes

Overview
This work explores the relationship between perceptions of professional identities, interprofessional education (IPE) and collaborative practice. Based upon research undertaken with a range of Health and Social Care Staff (H&SC) representing 12 professions, it highlights a need to shift the way in which we conceptualise professional identities, and incorporate a new concept of ‘interprofessional responsibility’ (IPR) as a key strand in H&SC training programmes.

Rationale
This study emerged from a large-scale collaboration involving sixteen H&SC professions, where opinions from research participants were indicative that their own views could in fact be one of the main barriers to implementing successful interprofessional education. Consequently, this study was designed to explore H&SC staff experiences of IPE, and how this linked to their own conceptualizations of professional identity.

This work takes a highly original position by defining H&SC professionals as working across two domains, those primarily working in health service provision (defined as ‘NHS staff’), and those working in academic departments (defined as ‘academic staff’). A critical literature review highlighted that this distinction is rarely represented in existing studies exploring IPE. This is surprising, as for IPE to have a meaningful lasting impact, it is necessary for classroom-based initiatives to be backed up by placement learning experiences, and vice-versa.

Research Questions
Building on this two-domain lens, three research questions guided the study:
1. How do H&SC staff conceptualise their professional identity, and the professional identity of other professions with whom they work or learn?
2. Do H&SC staff perceive that professional identities are reinforced, challenged or changed by interprofessional education and / or collaborative practice?
3. What implications do conceptualisations of professional identities and IPE have for the implementation of educational initiatives aimed at improving teamwork between professions for the ultimate aim of improving service user care?

Methods
A series (n=33) of semi-structured interviews were undertaken with H&SC working in England, exploring participants own IPE experiences of IPE and views of their own professional identity. Respondents were recruited through engagement with an earlier phase of the research work (an online survey) or via emails to local Higher Education Institutions.

Approach
A phenomenological approach was utilised, with a focus on encouraging respondents to describe what the most important aspects were for them of professional identity and IPE (Rossman and Rallis, 2003). This approach naturally influenced the exploratory analysis of results: coding was undertaken manually, and themes derived, through multiple readings of the data. This inductive approach was chosen as being the most appropriate for explorative inquiry, allowing for themes to emerge from the data, rather than fitting these into a pre-existing coding frame.

Findings
The results revealed that professionals do not perceive their identities as aligned to over-arching professional labels. Most respondents felt much more closely aligned in identity to the teams that they worked with (e.g. child health) regardless of their professional role.

A number of respondents made negative comments about other professions during the study. Given the influence of staff members on the socialisation processes of trainee professionals, the willingness to express stereotypically negative views of professions may mean that they are adopted and reinforced by students.
Academic staff also identified that much IPE currently taught in universities serves the purpose of box-ticking rather than being delivered in meaningful way. This is concerning if negative experiences of IPE are long-lasting on attitudes towards collaborative practice or on opinions of other professions.

Impact & Recommendations
Refocusing effective IPE through a new concept of ‘interprofessional responsibility’ (IPR) presents a real opportunity to help both remediate these findings and help all H&SC professions to reconceptualise their identity. All professionals have a responsibility to work across professional boundaries in order to ensure the best patient care is provided; and need to understand these responsibilities in the context of their job roles (Cameron, 2011). It is proposed the concept of IPR can open up debate around how this is best achieved together, and work as a concept that can be introduced early on to student professionals and built on, through experience, over time. In this way, IPR could be introduced as a core element of each individual professions’ identity. It is proposed that the incorporation of IPR will help enhance professional practices, helping students understand from the outset of their professional careers the responsibilities towards working together effectively that will ultimately enable them to provide the best possible care to all patients and service users.

References

Thursday 12th July, 11.00am – 11.20am, Sage 1
Small Grant Award 2017: ‘Not a doctor’: the professional identity formation of physician associate (PA) students.

C Morris, Reader in Medical Education Research and Development, QMUL; W Lowe, Senior Lecturer in Medical Sociology - Institute for Health Sciences Education, Barts and the London School of Medicine and Dentistry, Queen Mary University London; J Strand De Oliveira, Professor, Department of Community and Family Medicine and Professor, Duke School of Nursing, Duke University Medical Center,

The profession of physician associate (PA) began in the USA in 1965, emerging in the UK early this millennium (currently approx. 260 PAs work in the UK, compared to 150,000+ doctors). Whilst there is an agreed national curriculum and licencing exam for PAs, registration is currently voluntary. The Department of Health (2012) defines the PA as ‘a new healthcare professional who, while not a doctor works to the medical model’ [our emphasis]. PAs are defined in relation to what they are not, rather than what they are. In our experience, this process of othering (positioning PAs identity in relation or opposition to doctors) is common (e.g. Ostler et al 2012, BMA 2016). We believe this to be significant in relation to PA professional identity formation and their integration into healthcare teams.

Professional identity formation involves socialisation into professional communities (Cruess et al 2015). Our study explores how this newly emerging professional group self-categorise (‘who I think I am’) and negotiate their identity in relation to ‘other’ professions (‘who I think you think I am’) (Monrouxe 2010). This is a qualitative research enquiry, with a socio-cultural framing i.e. one where learning is understood as a social practice, involving active participation in communities (of practice) and the construction of identities in relation to that practice.

Our study utilises audio-recorded semi-structured interviews to trace shifts in the ways PA students talk about how learning is changing ‘who they are’ and shaping ‘who they will be’. Data collection takes place at three points: at the start of the programme, after the first block of clinical placements and again during their second year of their programme.

We are currently conducting final interviews and analysing data. Our initial impressions support the premise that professional identity is constantly being negotiated as students seek to reconcile their self-categorisations with the ways they are positioned by other healthcare professionals. This is revealed in the ways they are introduced to patients and the types of learning opportunities they are afforded (or otherwise). We will present findings with an emphasis on implications for curriculum design and faculty development.

Acknowledgements: this work is supported by an ASME small grant 2017.

References
Monrouxe L.V. Identity, identification and medical education: why should we care? Medical Education. 2010; 44: 40-49.
Small Grant Award 2017: 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 J

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; 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)

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.

Aims

- To explore the experiences of PA students during their primary care placement at BSMS
- To gauge the PA students’ perceptions of their role in healthcare delivery in primary care
- To gain an insight into the perceptions of primary care staff around the PA primary care education placement programme
- Gauge the level of understanding amongst the primary care staff surrounding the role and skills of PAs in primary care

Literature review

A literature review has been performed. There is currently a dearth of information published in the UK surrounding the training, collaborative working and impact of PAs. UK research published to date is primarily focussed on the contribution of qualified PAs working in primary care settings. There are no studies published in the UK surrounding the PA’s primary care teaching. Therefore my study will provide a unique insight into this.

Methodology

This qualitative study will employ two methods. One method involves analysing data from two focus groups of 4 or 5 PA students each and the second method involves analysing data from 1:1 semi-structured interviews with all 9 PA students in the cohort and 10-15 primary care staff. We will adopt an interpretive phenomenological approach. This is because we are interested in the individual’s lived experiences of the PA programme and the meanings which those experiences hold for the individuals.

Focus groups and interviews will allow us to collect detailed information from the participants. We hope that we will be able to identify common themes from the focus groups to inform our topic guide for the 1:1 structured interviews.

Projected outcomes

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.

References


Wednesday 11th July, 3.40-4.20pm, Sage 1
Small Grant Award 2017: Multisource Feedback and the Validity of Self-Selection: A Social Network Analysis in Primary Healthcare

S Stevens 1, A Chatterjee 1, J Archer 1, J Scott 2
1 Peninsular School of Medicine, Plymouth University
2 Department of Sociology, Philosophy and Anthropology, University of Exeter

Background
Multisource feedback (MSF) is a method of workplace-based assessment in which doctors are evaluated by their colleagues on key performance behaviours. MSF forms a core component of the ‘medical revalidation’ process in the UK, established by the government to quality assure clinical practice and certify that all licensed doctors ‘up-to-date and fit-to-practise’. A number of threats to the validity of MSF have been highlighted, with biases in the selection of raters being one underexplored area of research. This project provides new insights into the validity of MSF within revalidation by answering the research question ‘does the social network within a primary healthcare team influence rater selection within MSF assessments of general practitioners (GP’s)?’

Methodology
Adopting a critical realist perspective and social network analysis approach, this study utilises a cross sectional, mixed methods design to explore the validity of MSF. Research methods include an online survey, archival data and in-depth interviews, have been adopted to explore the impact of friendship on rater nomination choices made by doctors from both an explicit and implicit perspective. To explore differences in patterns of rater nomination decisions made by GP’s, a case study approach is adopted involving four GP practices in the South West of England, each differing in healthcare team size and geographic locality.

Results
This paper will disseminate the interim results of this ongoing study support by an ASME 2017 Small Grant Award. Early findings suggest ‘tribal’ patterns of socialisation within healthcare teams, with stronger social relationships between GP’s than other non-medical staff. Significant correlations also exist between the social network of GP’s and their rater nomination choices. Finally, in-depth interviews provide new insights into the attitudes of those involved with MSF in revalidation. Results have important implications for understanding the existence of potential bias within MSF.

Conclusion
The final results of the study aim to increase the validity of MSF instruments used within revalidation and subsequently support the quality and safety of patient care.

References

Wednesday 11th July, 3.20-3.40pm, Sage 1
JASME Sir John Ellis Student Prize Winner 2018 – SSM: Who do you think you are? PA student perceptions of professional identity formation
H Preston, Newcastle University

Extended summary
This study was carried out as part of a Masters in Medical Education qualification at Newcastle University. I was assigned a supervisor, Dr Laura Delgaty, to oversee the research process. Throughout working on the study I met with her on a regular basis to discuss the progress and direction of the work. These meetings enabled potential flaws in the study to be identified and corrected, whilst also acting as a sound-board to test developing ideas and interpretations.

Background
The advent of ‘hybrid’ roles that blur the traditional distinctions between healthcare professionals signals a shift towards a more integrative delivery of healthcare in this country. The Physician Associate (PA) is an example of such a role and is set to have a significant impact on healthcare provision in the coming years. However, little is currently understood about the views and perspectives of these incumbent PAs. Given the multifaceted nature of the job, it appears timely to clarify issues of professional identity; that is “the perception of oneself as a professional” (Weaver et al., 2011, p.1221). Certainly, recent literature has advocated the importance of healthcare professionals forming a professional identity and warned of the dissonance, stress and attrition if this does not occur (Monrouxe, 2010).

Literature Review
The currently accepted conceptualisation of identity is one that is both individually and socially constructed. Therefore, social identity theory (SIT), an established theoretical perspective that holds both individual and group processes at its core is appropriate to guide understanding of professional identity formation (PIF) (Jenkins, 2008). Central concepts of SIT include the ‘accessibility’ and ‘fit’ of identities. ‘Accessibility’ refers to the difficulty for an individual to develop a certain identity unless it is freely available for them to observe (Burford, 2012). Certainly, numerous studies have asserted that increased immersion in a clinical environment boosts PIF in healthcare students (Crossley & Vivekananda-Schmidt, 2009; Littlewood et al., 2005; Goldie et al., 2007). Further, ‘fit’ refers to the congruence between a certain group identity and an individual’s own self-concept (Burford, 2012). Again, many studies have demonstrated that when self-identity and work-identity align, an individual feels strongly attached to a profession (Pratt et al., 2006; Costello, 2005; Gude, 2005).

Methodology
The overarching theoretical stance of this study was interpretivism and the methodological approach was based on phenomenology. Qualitative data was collected through in depth semi-structured interviews with four first year PA students at Newcastle University. Transcripts of these interviews were analysed through thematic analysis.
Based on the findings, it appears that the PA students do not have an established and clear sense of professional identity. The themes are addressed in more depth below.

### Practical role confusion
A central reason preventing the students from developing an entirely clear sense of professional identity appeared to be due to the lack of clarity about the practical role of the PA. Without a clear remit, it is evident that development of a distinct professional identity was hampered. Other HCPs and the wider media’s views of the role as unclear, and in some cases unwanted, also appeared to inhibit the development of a clear professional identity in the PA students. This led to PA students adopting the identity of medical students, rather than contributing to the burgeoning professional identity of the PA.

Many studies have noted how the loss of ‘core’ work and the adoption of overlapping ‘hybrid’ roles in the healthcare environment can pose threats to a clear professional identity in HCPs (Borthwick et al., 2010; Musselbrook, 2013; Segar et al., 2014).

### Novel/emergent role
A lack of firm establishment in the healthcare environment seemed to restrict their PIF as a lack of qualified PAs translated to a lack of suitable role models for students. In the absence of any professional PAs to relate to, students turned to doctors to act as their surrogate role models. Therefore, the lack of role models and subsequent adoption of doctors could be interpreted as both acting as a barrier to the development of an appropriate professional identity and also promoting the growth of an unrealistic identity; that of the doctor. The importance of role models in encouraging the transition from student to professional has been acknowledged for many years in both the medical education literature and wider research (Ibarra, 1999; Baernstein et al., 2009; Phillips and Clarke, 2012).

### Conclusions
The PA students appeared to demonstrate an emerging, yet delicate, professional identity comprised of different aspects. There appeared to be multiple influences impacting on the students’ professional identity formation. Some impactors were supportive, such as the value of clinical placements, whilst others seemed more inhibitory, such as the perceived lack of clarity about the PA and a paucity of role models. A possible implication of this study may lie in greater awareness about the nature and remit of the PA role from students, other healthcare professionals and wider society.

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**Figure 1: The four themes**

<table>
<thead>
<tr>
<th>Theme</th>
<th>Details</th>
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</thead>
<tbody>
<tr>
<td>Practical role confusion</td>
<td>• This theme incorporated the participants’ other HCPs’ and wider society’s lack of understanding about the practical ‘day to day’ aspects of the role.</td>
</tr>
<tr>
<td>Novel/emergent</td>
<td>• This theme demonstrates how the role was perceived as exciting, but also in its infancy. Due to this, the PA students sought to expand awareness of the role; considered that developments were required of the role; felt they were answering an urgent service need and perceived there to be a lack of role models</td>
</tr>
<tr>
<td>Values</td>
<td>• This theme included both professional and personal values: - Professional values included acting with dignity, empathy, non-discrimination, compassion and an adherence to the ‘medical model’ - Personal values included the desire to make a difference to patients’ lives and the enjoyment of interacting with patients.</td>
</tr>
<tr>
<td>Formal 'learning'</td>
<td>• The academic nature of the course, appeal of its short duration and the value of placements was shared among all participants.</td>
</tr>
</tbody>
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References


Wednesday 11th July, 2.00-2.40pm, Sage 1
JASME Sir John Ellis Student Prize Winner 2018 – SSM: Video-based Virtual Patient Journeys: Narrative, first-person videos as a novel teaching aid for students
J Salem, University of Bristol

Project Summary
The aim of our project was to create a video-based virtual patient journey that could be used as a learning resource amongst medical students. The scenarios put forward were related to a newly diagnosed asthma patient as it was believed to be a core topic covered throughout medical school training.

To identify the needs of our student group a questionnaire was sent out to thirty third and fourth year medical students alongside a focus group. This identified three main areas:

1) Students want a better understanding of what a patient goes through during the different stages of their illness.
2) Students want more standardised teaching between hospitals which they can get access to outside of the hospital environment.
3) Students want to have a better understanding of the reasoning behind clinical decisions and have greater responsibility for a patient within the realms of their competency.

From this a patient narrative was formed and filmed in three related videos that follow the journey of a patient with asthma. A variety of levels of interactivity were created taking into account student feedback and financial constraints with the acute asthma attack being the most interactive.

The project was evaluated using a focus group who believed the videos were engaging and a useful aid to their studies. The narrative story helped students both remember the clinical decisions more vividly whilst also being able to see the impact on the patient. This was further improved when the levels of interactivity enabled the students to take on the responsibility of the healthcare provider. The students welcomed the ability to develop their history, examination, clinical procedures and clinical reasoning skills all within the same learning resource.

The project is being developed into an educational study at two Bristol Trusts where the resource is being compared with a traditional tutorial-based teaching to assess for knowledge and confidence gain. The results of the study will be ready for presentation by February 2018.

The Innovation of the project
Narrative, interactive virtual patient journeys are an original concept and our group are the first to create this form of learning resource.

The in-video decision-making virtual patient journey format has the potential to supersede typical learning styles. It allows the rare opportunity for a student to make clinical decisions in a safe and controlled environment that have a direct effect on a patient. By seeing a patient improve or deteriorate in relation to their clinical choices, it provides a unique opportunity for students to take on the responsibility of a patient’s care and learn from their mistakes, something that for obvious ethical reasons cannot be conducted in real life.

Early evaluative evidence suggests students have found the integration of video-based and narrative learning styles within Virtual Patient’s a useful technique in the development of a range of their core competencies such as clinical skills, medical knowledge and professional skills that are currently taught through a multitude of methods within the hospital environment.

The Impact on Medical Education
The ability to teach a variety of core competencies such as history and examination skills, clinical skills, OSCE practice, hospital exposure and professionalism within a single resource is rare. Furthermore, despite medical students wanting financially and time intensive tutorial-based teaching, our virtual patient journeys provide a cheaper, more accessible alternative that can be used alongside traditional methods to supplement a student’s hospital experience whilst also being accessible and reproducible to many aspects of the curriculum.
As a result our resource can be used to consolidate a student’s hospital experience whilst also delivering a baseline level of clinical exposure and knowledge, irrespective of the hospital placement a student is assigned to thereby addressing one of the main concerns put forward by students.

Narrative medicine follows the patient through their illness as a means of encouraging the patient-physician relationship by developing a student’s communication and professionalism. By seeing the same patient repeatedly in different clinical situations, it mimics real-life clinical exposure, helping students empathise and reflect on what the patient has been through, whilst also developing pattern recognition and the integration of knowledge with clinical evidence.

**Conclusion**
We have created a Narrative Virtual Patient Journey, the first of its kind. Early evaluation has shown students find it a useful resource that teaches a multitude of core competencies within a single online resource. It provides students with the rare opportunity to take on the responsibility of the doctor whilst also showing a greater proportion of the patient journey that is not always possible in a clinical environment.

**Level of Supervision**
I was assisted by Daisy Films and Julian Cook who helped film and create the interactivity of the Acute asthma attack scenario. All other work was filmed and completed by myself with supervision from Dr. Junaid Fukuta who has previous experience in developing virtual patients.

**Video Links**
- **Video 1:** Presentation of Shortness of Breath at GP  
  [https://www.youtube.com/watch?v=LYmemez6HCc&feature=youtu.be](https://www.youtube.com/watch?v=LYmemez6HCc&feature=youtu.be)
- **Video 2:** Interactive Management of Acute asthma attack  
  [http://www.gedulah.co.uk/e-learning/virtual_patients/asthma_0-2-5/](http://www.gedulah.co.uk/e-learning/virtual_patients/asthma_0-2-5/)
- **Video 3:** Nurse-led follow up  
  [https://www.youtube.com/watch?v=WIGzKC__VS8&feature=youtu.be](https://www.youtube.com/watch?v=WIGzKC__VS8&feature=youtu.be)

*Wednesday 11th July, 2.00-2.40pm, Sage 1*
LDG: New Leaders Award Winner 2018: NHS England National Social Prescribing Student Champion Scheme
BC Giurca, Year 4, Exeter Medical School

Background
The importance of Social Prescribing (SP) and Social Determinants of Health (SDH) has been illustrated by the NHS Five Year Forward View (1), as well as the GP Forward View published in 2016 (2). Social prescribing is enabling healthcare professionals to refer patients to a link worker, to co-design a non-clinical social prescription to improve their health and wellbeing (3). The overstretched state of the NHS requires the doctors of tomorrow to be equipped with a new toolkit that could contribute to the reduction in strain on both Primary and Secondary care services. However, most medical students and graduates are unaware of the concept of SP and its potential benefits in tackling SDH (3,4). Because this concept has not been formally embedded in the medical school curriculum, several medical schools have attempted introducing teaching sessions on SP and SDH through Student Selected Components (4). Unfortunately, these sessions only teach a small, self-selected, group of medical students. Significant confusion and lack of awareness remains among medical students and junior doctors at a national level.

Initiative and Solution
Being a lecturer at Exeter Medical School since 2014 has helped me to understand that medical students represent an untapped asset that can build the foundation of a brighter future through peer teaching. With support from NHS England, College of Medicine, and SP Network, I have successfully founded the NHS England National Social Prescribing Student Champion Scheme (https://collegeofmedicine.org.uk/national-social-prescribing-student-champion-scheme-the-social-prescribing-network-the-college-of-medicine-and-nhs-england/). This has been created to enable medical students - the generation of today, and the future doctors of tomorrow - to get involved in learning about, teaching, and promoting SP and SDH within their region. A total of 32 Student Champions representing each medical school within the UK were recruited nationally to represent their region. Each student champion was given four specific aims:

1. Experience and Learn
I have liaised extensively with NHS England and Social Prescribing Network to ensure free student places and travel bursaries to regional and national SP and SDH conferences where students can first learn more about these subjects.

2. Teach and Inspire
Upon completion of the learning process, each student champion had to deliver a minimum of three small or large group teaching sessions to their colleagues. Champions were involved in designing their sessions, although all materials have been quality checked by senior academics.

3. Network and disseminate work
Joining regional and national meetings, creating posters and disseminating their work, with travel bursaries provided.

4. Reflect and apply acquired knowledge
Reflecting upon their experience through a 1000-word report and applying the acquired knowledge to clinical scenarios, training, and future career.

The above steps have been simplified in the following figure.
Overcoming obstacles
Implementation and credibility
Perhaps the biggest challenge was getting organisations and academics to believe in my idea. Many organisations were worried about funding. Therefore, I made my scheme sustainable and achievable with no funding at all. I created a strong protocol (available on request) outlining every single detail of how the scheme will be led and managed. Tens if not hundreds of my emails were turned down because I was ‘just a medical student’.
This is when I have grown most, both as a person and as a young leader. It is through this adversity that I have shown initiative, courage, and vision by promoting this idea, both through social media and public student gatherings. The hundreds of emails paid off in the end when I was invited to pitch my idea in front of a panel made of several healthcare leaders.
Empowering others: A sense of belonging
The second biggest challenge was maintaining students’ enthusiasm. I have hosted weekly meetings and promoted discussion among members of my team. However, what truly motivated students was the long-term vision of leading their peers by example. I repeatedly stated that everyone is part of this vision, encouraging them to take ownership of the idea. As a result, more than 15 self-driven student champions have developed innovative approaches to teaching, including an online learning platform at KCL, videos, and research on SP and SDH.

Leadership and Impact
I am deeply humbled to be the founder and chair of this extensive network of medical students. I have been involved in all aspects of this initiative, from designing and creating the idea protocol, to pitching it to NHS England and other significant organisations, to liaising with academics and clinicians from each medical school to secure support for student champions, and all the way to managing all enquiries and uncertainties received from student champions and other collaborating organisations.
In over a year, 32 student champions have successfully delivered 63 SP and SDH peer-teaching sessions, involving over 1200 medical students from all UK medical schools.
Those who have agreed to complete our pre-and post-session surveys, have confirmed our concern that most medical students (73%) have not heard of SP before the sessions.
Have you heard of Social Prescribing before this teaching session?
423 responses

Figure 3 Lack of awareness of Social Prescribing among medical students nationally

Upon completion of the sessions, almost all medical students (98.3%) agreed that this concept is important to them as medical students and as the future doctors of tomorrow (99%), as illustrated below.

Do you think the concept of Social Prescribing is relevant to medical students?
344 responses

Figure 4 Relevance of Social Prescribing to medical students

Do you think this concept is important for the doctors of tomorrow?
308 responses

Figure 5 Relevance of Social Prescribing to medical students, as the future doctors of tomorrow
Comments from medical students attending the teaching sessions are illustrated in Figure 5.

Other highlights include the organising and involvement of student champions in **11 regional conferences on SP and SDH**, through our collaboration with NHSE and SP Network. Students have completed and have showcased **12 research projects** on SP and SDH.

I have secured £8,000 from NHSE to organise the first ever National Social Prescribing Conference for Medical Students and Junior Doctors, being held on the 24th of March in London ([http://www.rcgp.org.uk/learning/membership/student-events/national-social-prescribing-conference.aspx](http://www.rcgp.org.uk/learning/membership/student-events/national-social-prescribing-conference.aspx)). Free travel bursaries have ensured the access of those from Scotland, Wales, and Ireland.

I feel honoured and privileged that my work has also gained national recognition from HRH Prince of Wales, whom I have met twice and who has awarded me an honorarium for community impact through the scheme.

Future work

My efforts don’t stop here. Our data is currently used by the GMC to update and change the undergraduate medical school curriculum, by adding a universal definition for SP and strengthen the emphasis put on SDH.

Secondly, team expansion will occur next year, by introducing a national committee, as well as accepting up to five positions for student champions in each medical school. Finally, the scheme is involved in organising of the 1st International Social Prescribing Research Conference on the 16th of June at the University of Salford, in collaboration with the SP Network.
I believe this scheme will not only change the medical school curriculum but will also positively impact the lives of millions of patients who will receive better care as young, enthusiastic, and knowledgeable medical students become the doctors of tomorrow.

The above project has been set from pure passion and belief that medical students have the potential to play a key part in shaping the future of patient care. I truly hope my enthusiasm and motivation has been reflected in this submission.

References

4. Wylie, Ann & Leedham-Green, Kay & Tadeka, Yuko. 2014. Engaging medical students and their teachers with the determinants of health: the approaches and impact of a curriculum development at one large UK medical school. MeEdPublish. 10.15694/mep.2014.003.0044

Wednesday 11th July, 4.20-4.40pm, Sage 1
Abstracts submitted and accepted as **Presentations**
Listed by theme, and alphabetically within theme
Mixed methods research for implementing the WSLA integrated learning model in Health Science Degrees

Universidad Europea de Madrid

Background:
Preparing healthcare professionals to enhance their effectiveness implies changes in educational paradigms to reconnect with growing scientific knowledge and the evolution of new technology. Consequently, in the recent years Health Science Education has experimented a paradigm shift, moving forward towards fully integrated curricula [1]. For that reason, the Department of Basic Biomedical Sciences at the Universidad Europea de Madrid in Spain (UEM) is currently building up a common frame for curricula integration in all its Health Sciences degrees. In this context, our Faculty staff has developed an integrated learning model known as Work Station Learning Activities (WSLA) [2]. WSLA was designed as an instrument to integrate activities across preclinical years in all Health Science Degrees. Using this approach, we have implemented several WSLA modules that meet selected learning objectives. Based on a previous pilot study, the aim of our ongoing research project is to evaluate whether the implementation of WSLA teaching resource results on better educational outcomes in Health Sciences Education. Our hypothesis is that integrated learning conducted through WSLA methodology improves academic performance on basic subjects of students in all Health Sciences degrees.

Methodology:
To accomplish these goals, we have designed an observational cohort study with a concurrent mixed approach over more than 3000 first year students from Medicine, Dentistry and Physiotherapy degrees. Our study will be pursued from a quantitative and qualitative perspective using mixed methods concurrent research approach, and focus group discussion as data collection method. Revolving around the WSLA method, this project also includes a mentoring plan as well as an specific training for faculty staff.

Results:
Preliminary results from our previous pilot study [2] stated that student’s perception about the WSLA was overall positive. Seventy nine percent of participants in that study considered that WSLA sessions were more useful than non-integrated activities and eighty three percent confirmed that the WSLA methodology was effective at integrating concepts covered by different subjects. Besides, our mentoring program has included a series of workshops and courses from 2015 that aimed to encourage training a new faculty generation through the implementation of active learning methodologies and the WSLA approach. This project has been also awarded by different educational agents in Spain, including the Spanish Society of Physiology and the Spanish Society of Medical Education.

Discussion:
This new instrument offers several pedagogical and practical advantages in coping with national regulatory demands while advancing towards a fully integrated Harden’s model [1] recommended as an educational strategy. The WSLA is a flexible and scalable instrument for moving towards integrated curricula, and can be successfully adapted to teach basic subjects in preclinical years of health science degrees. WSLA is suitable for large groups of students and in a variety of contexts or environments using clinical scenarios as connecting threads. Further research will help to identify additional improvements and to evaluate the impact of this new instrument across several academic years. We are actively working to promote dissemination of the WSLA model as a new scalable instrument for paradigm shift in medical education.

References:
Can undergraduate students improve their likelihood of undertaking intimate examinations?
D Cahill, A Armitage
University of Bristol

Background:
As teachers, we know that undergraduate medical students can struggle to gain satisfactory competence levels in intimate examination, particularly vaginal examinations. Last year's ASME meeting had several papers on this topic with many questions but few answers. We are presenting the answer to one question: What factors increase the likelihood of a woman allowing a student to perform an intimate examination?

Methodology:
Following ethical review, questionnaires were given to women attending a tertiary gynaecology hospital, asking a series of questions about what would influence their decision to agree to be examined by a student. Demographic data and data on previous gynaecological history and preferences on any student who might see them in clinic. We asked women to indicate their willingness to agree to vaginal examination (but not to undergo the examination).

Results:
The woman’s hypothetical agreement was positively affected by the student’s gender (female) and age (preferring older students); positively affected by an informal/relaxed manner and smart presentation, and positively by whether the woman had experienced gynaecology clinics before. An association existed between being willing to be examined and whether the student had engaged with the woman by finding out what her presenting complaint was. Detailed free text analysis was also undertaken, and will be presented.

Discussion:
Women’s willingness to agree to vaginal examination is influenced by several student-related factors, some of which can be modified to positively change the woman’s likelihood to agree to intimate examination.

Ref: 072, Wednesday 11th July, 3.20-3.40pm, C2
Evaluating the initiation of practical clinical skills training during the first year of medical education
J Seale, M Knoetze, A Phung, C Butchers
King’s College London

Background:
An increasing number of medical schools are commencing clinical skills training during the initial stages of the medical curriculum. The early introduction of tuition related to human factors and examination techniques have been previously demonstrated to be an effective means of enhancing the acquisition and development of these skills 1-2. In contrast, there is a lack of research assessing medical students’ attitudes towards practical clinical skills training, such as blood pressure measurement and urinalysis, during the first year of medical education. The clinical tutors at King’s College London (KCL) addressed this issue by comparing the views of students given differing degrees of practical clinical skills teaching over a one or two year period.

Methodology:
Students were recruited from the KCL Stage curriculum (n=184) consisting of 48 hours of practical clinical skills tuition over a one year period and the KCL Phase curriculum (n=94) involving 12 hours of skills teaching over two years. All participants completed an online questionnaire. A five-point Likert scale determined students’ perceived preparedness for carrying out the practical clinical skills deemed appropriate for their level of training in accordance with the UK General Medical Council guidance 3. A separate five-point Likert scale ascertained students’ views regarding the introduction of clinical skills training during the first year of medical education. Responses of the Stage and Phase students were compared using Mann-Whitney U tests. Focus groups involving 26 Stage and 20 Phase students were conducted to further explore student attitudes towards the early introduction of this training and the factors considered integral to effective practical clinical skills sessions. Subsequent focus group transcripts underwent thematic analysis.

Results:
The majority of Stage (92%) and Phase (68%) students agreed that year one was the best time to start practical skills training. Significantly more Stage compared to Phase students reported feeling prepared to carry out all of the clinical skills listed in the questionnaire (p<0.001 for each skill) except for a manual blood pressure measurement and urinalysis in which both groups reported similar levels of preparedness. Significantly more Phase compared to Stage students reported that they did not receive enough practical clinical skills teaching (p<0.001) or the opportunity to practise (p<0.001) whereas both groups agreed that learning these skills in a practical session compared to a lecture enabled a better understanding (Stage 99%; Phase 100%) and retention (Stage 97%; Phase 96%) of the topic. Focus group thematic analysis identified three main themes: Student opinions regarding the initiation of clinical skills teaching in year 1; Perceived impact of practical clinical skills training on students’ learning; Factors to consider when designing a medical undergraduate practical clinical skills programme. The latter theme identified session format, knowledgeable tutors and practise opportunities to be important components of a skills session.

Discussion:
This study provides clear student support for the initiation of practical clinical skills training during the first year of medical school and demonstrates the positive impact such tuition can have on students’ perceived preparedness for carrying out these skills. The finding that students identified predominantly practical based teaching sessions, knowledgeable tutors and practise opportunities as key factors in the provision of clinical skills tuition provides guidance when constructing and delivering future skills sessions.

References:

Ref: 067, Wednesday 11th July, 3.40-4.00pm,
Providing “the perfect way to feel safe whilst practising examination:” Using male clinical teaching associates to teach intimate examinations

H Bothwell, K A Hanks, J Taylor, K Jones
Swindon Academy, University of Bristol

Background:
Teaching medical students how to competently perform intimate examinations, such as digital rectal examination (DRE), is an on-going challenge for educators. Evidence suggests that teaching and clinical exposure to this important skill is variable and final year students report low levels of confidence in their ability to interpret examination findings (1)(2). In recent years, particularly in Australia and New Zealand there has been increasing use of clinical teaching associates (CTA) for training medical students in intimate examinations, however, there are few studies reporting their use in UK-based training (3)(4). Clinical teaching associates are lay people who are trained to use their bodies to teach medical students intimate examination. At Swindon Academy, based at the Great Western Hospital, a successful programme of CTA-based teaching has been employed to teach medical students gynaecological and breast examination skills with consistently positive feedback. In the 2017-18 academic year, after successful recruitment and training of male CTAs, medical students in the fifth and third years of the undergraduate course were provided the opportunity to undertake training in DREs and male genital examinations using CTAs.

Methodology:
Students in the fifth and third year of the course (n=) were assigned into groups of 2 or 3 to attend teaching led by two male CTAs. This included role-play of communication and consent before performing intimate examinations on one of the male CTAs. Immediate feedback was given at the point of examination as to whether students were able to appropriately identify important anatomical points e.g. prostate. Students completed voluntary questionnaires exploring their perceptions of their own skills and confidence in performing intimate examinations before and after the CTA teaching. They were also asked to rate CTA teaching compared to traditional teaching methods (all students had previously received mannequin based teaching.)

Results:
Preliminary results are available from the final year students which show significant improvement across multiple different aspects of performing intimate examinations. The quantitative data collected using students self-scoring their own abilities before and after the teaching suggests that CTA teaching resulting in students feeling significantly more prepared to perform DREs and genital examinations with mean improvements of 3.42 and 5.03 on ten point Likert scales respectively (p values 0.0001.) Students reported feeling more confident that they would not harm the patient with a mean improvement of 3.39 (p value 0.0001) Students also reported significantly improved communication skills with an improvement of 2.85 in gaining informed from a patient. Students rated CTA-based training as more effective in terms of communication skills, understanding patient comfort and dignity, performing the examinations and being able to ask questions. Analysis of qualitative feedback from open questions is on-going but themes identified include the positive experience of getting immediate feedback on examination techniques and the importance of a supportive learning environment.

Discussion:
The evidence from this study strongly supports providing CTA-based teaching to medical students in order to develop their skills in performing intimate examinations. Students find the opportunity to practice sensitive examinations on a real person a beneficial learning experience and feel significantly more prepared to perform these skills in clinical practice after undertaking the teaching session. Compared to traditional teaching, students find CTA-based teaching more effective with regards to key aspects including communication skills, understanding patient comfort and dignity, performing the exams and the overall learning environment. This teaching will continue to be offered to students as part of their clinical training in order to gain further evidence to support this innovative teaching approach.

References:

Ref: 236, Wednesday 11th July, 4.00-4.20pm, C2
SECO: An innovative approach to clinical decision making in physician associate education.
H Millott, E Storr
University of Leeds

Background:
Physician Associate programmes are now common place at higher education institutes throughout the UK. This relatively new role will help to ease some of the workforce demands in local areas and at the University of Leeds has a particular focus in primary care.
The SECO concept was devised(1) in 2002 at the Department of General Practice, University of Otago, New Zealand, as an educational tool to develop senior medical students’ skills in clinical reasoning in a safe learning environment. To our knowledge this method has not been used in physician associate education thus far.
The acronym “SECO” represents “Safe and Effective Clinical Outcomes.” Safe outcomes = those that result in no increased harm in the short or long term to either the patient or the doctor. Effective outcomes = evidence based, patient centred, context sensitive and resource efficient.
Each simulated patient case represented common problems seen in primary care and had specific ‘safe’ and ‘effective’ outcomes that students were expected to achieve, including shared-decision making and follow-up.

Methodology:
Students took part in a 2 hour SECO clinic. The structure of these clinics involved students working in pairs to complete 2 full consultations with simulated patients. Each consultation lasted 40 minutes and the lead student interviewed and examined the patient and formulated a management plan, recording their clinical notes and any further investigations, referrals and follow up necessary. iPads with clinical information websites (e.g. NICE guidelines) were provided and students could telephone a senior clinician for advice if needed. The structure of the consultation is designed to mimic a real-world consultation and improves authenticity of the situation.
The emphasis was on patient safety so students were encouraged to recognise ‘red flag’ symptoms and use any resources they chose to achieve the safe and effective outcomes for each scenario. Feedback to students about their success in achieving SECO was provided by written feedback from the simulated patients, evidence-based clinical information and by discussion at a debrief session immediately after the clinic. Written evaluation was collected during the week after the SECO clinic.
The same format was repeated with the same students 3 months after the first SECO clinic.

Results:
Students found the experience useful to think of patient management from start to finish rather than as isolated episodes. This was the first opportunity many of the students had at completing a patient consultation without being observed. Students commented on the importance of recognising their limitations and knowing when to ask for help from a senior clinician. Students completing the second clinic appeared less nervous of telephoning a senior for advice as this was not seen as ‘failure’ and they recognised it as a routine part of being a practicing physician associate. Students also appreciated the extended consultation time and that they were not being ‘judged’ or assessed.

Discussion:
The SECO model has been used successfully in New Zealand to develop medical students’ clinical reasoning skills and safe practice for the past 12 years. In more recent times it has been used by at least one medical school in the UK, however, this is the first time the method has been used in physician associate education. This extension of simulation provides a supportive learning environment in which students can rehearse conducting a consultation from start to finish and practise their communication and examination skills. A particularly important aspect of student learning is recognition of their limits of knowledge or skills and when assistance is needed. This point is especially relevant to physician associates who are dependent practitioners and work within a defined scope of practice.

References:

Ref: 380, Wednesday 11th July, 4.20-4.40pm, C2
Starting practice out of practice: concerns with undergraduate Urology education
E Osen, S Smith
Colchester Hospital University Foundation NHS Trust

Background:
At the beginning of their careers, Foundation doctors are expected to perform urological procedures, irrespective of specialty posting or setting. It is vitally important that they graduate from medical school having practised the skills required at this early stage in their careers in order to ensure competent clinical practice from the outset.

Methodology:
We developed a 25-question survey to examine the efficacy of medical undergraduate education in urology from the perspective of newly qualified doctors. This was distributed to Foundation doctors in the East of England region, as both an online and paper form. Respondents were asked about their medical undergraduate placements, experience in performing 2 examinations (digital rectal examination [DRE] and male genital examination), and 5 key urological procedures (male and female urinary catheterisation; three-way catheter insertion; suprapubic catheter change; and bladder washout and irrigation). They were also asked to self-report on their confidence at performing the above examinations and procedures using 10-point Likert scales.

Results:
We received 78 responses from junior doctors who had attended 28 medical schools, of which 21 were UK-based, 6 were EU medical schools, and 1 was international. 56.4% (n=44) respondents were Foundation Year 1 doctors and 43.6% (n=34) were Foundation Year 2 doctors.

Of these 78 junior doctors, 59% (n=46) had not completed a dedicated urology placement during their time at medical school, with 21.8% (n=17) having had a urology placement in a district general hospital and 20.5% (n=16) in a tertiary centre.

A sizeable minority of respondents reported they had not performed the 2 urological examinations on patients whilst at medical school: 25.6% (n=20) reported they had not performed a DRE on a patient—though 19.2% (n=15) had done so on a simulated model—and 35.9% (n=28) stated they had not performed a male genital examination. 30.8% of doctors (n=24) had not practised male genital examinations on either a real patient or a simulated model prior to graduation. Correspondingly, participants described themselves as more confident at DRE than male genital examinations, with average confidence scores of 7.0 and 6.1 (max. 10), respectively (p<0.05). 5.1% (n=4) had not performed either examination on a real patient or a simulated model.

Most juniors surveyed had performed basic urinary catheterisation on a patient during their undergraduate years: 76.9% of doctors (n=60) had performed urinary catheterisation on male patients and 59% (n=46) had performed urinary catheterisation on female patients. Correspondingly, junior doctors were significantly more confident at performing urinary catheterisation on male patients than on female patients, with mean self-rated confidence 7.1 and 6.1 (max. 10), respectively (p=0.005). Of some considerable concern, 2.6% (n=2) of respondents had not attempted any form of urinary catheterisation on either a simulated model or a patient of either gender.

Of the more advanced catheterisation procedures, only 6.4% (n=5) had performed a three-way catheter insertion, 2.6% (n=2) had performed a suprapubic catheter change, and 6.4% (n=5) had performed a bladder washout and irrigation. 55.1% (n=43) of the doctors surveyed had neither performed nor observed any of these three procedures. Self-reported confidence in these procedures was low, with an overall mean of 3.2 (max. 10).

Discussion:
Our cross-sectional study suggests that most Foundation doctors have limited clinically immersive experience of urology before entering the workplace. A concerningly large proportion of those surveyed had not had sufficient practice in basic examinations and procedures, and our survey demonstrated that confidence in these key skills is correlated to their exposure prior to qualification. This lack of practical experience at undergraduate-level procedural skills risks producing graduates under-prepared for the clinical challenges faced as a newly qualified doctor.

Ref: 235, Wednesday 11th July, 4.40-5.00pm, C2
Clinical Skills

Whole simulated consultations in primary and secondary care; an exploration of their impacts on final year students’ self-efficacy.
M Bartlett, R Kinston, A Panesar, N Roberts, R McKinley
University of Dundee School of Medicine

Background:
Keele’s senior medical students undertake whole unobserved simulated consultations in primary and secondary care settings to enhance their preparedness for clinical practice. An evaluation of this educational intervention found that while students perceived them to be an effective way to learn which was relevant to their future work, 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 investigate this further from the perspectives of students’ wellbeing and effects on their future motivation to learn, and for the further development and educational enhancement of the simulations. This work received an ASME/GMC award in 2017 to undertake this further work and we report on the outcomes.

Methodology:
We undertook a mixed methods study to address the questions
- What aspects of the simulation lead to changes in students’ self-efficacy?
- How can the simulation be developed to maximize students’ self-efficacy?

Quantitative data collection: A validated questionnaire and scale for measuring medical students’ self-efficacy was used.

Sampling students: All students in the cohort were asked to complete the self-efficacy questionnaire before and after their session. From this students with stable, reduced and enhanced self-efficacy were identified.

Qualitative data collection: All students with low or reduced self-efficacy scores were offered an individual debrief irrespective of whether they consent to be included in the study. Those who consented took part in a semi-structured interview.

Samples of students with enhanced and stable high or moderate self-efficacy were offered a debrief interview but these were only conducted if they consented for their data to be included in the study.

Analysis: A Realist logic was used; using published literature, a programme theory was developed. Interviews focused on students’ perceptions of their experiences in the sessions and included an exploration of the concepts identified in the programme theory. Data were analysed with reference to the programme theory to test and refine the theory by identifying configurations of contexts and mechanisms which changed students’ self-efficacy (the outcomes).

Results:
Data relate to a cohort of 109 final year students. Results will be presented at the conference.

Discussion:
These will be presented at the conference.

References:
Why are certain doctors referred for Fitness to Practice investigations?
A Medisauskaite, P Crampton, L Mehdizadeh, A Sturrock
UCL Medical School

Background:
Despite the decreasing number of doctors qualified outside the UK, the NHS still heavily relies on these doctors to provide healthcare [1]. It is, however, documented that doctors trained outside of the UK are more likely to be complained about and be sanctioned after a Fitness to Practice investigation [1, 2]. In order to better understand if certain groups of doctors are more likely to be complained against for particular reasons, we examine why doctors are referred to Fitness to Practice.

Methodology:
A retrospective cohort analysis of 2253 Fitness to Practice complaints for performance issues between 2008 and 2017 (data set provided by the GMC) was conducted. We analysed allegation type against the region of doctors’ primary qualification. There were 10 allegation types including clinical care, teamwork, relationships with patients and probity.

Results:
51.8% (1167) of all complaints were made against International Medical Graduates (IMG). Higher percentages of IMG doctors were referred for clinical issues (e.g. patient assessment and examination, etc.) compared to UK and European Economic Area (EEA) graduates (χ²(2) = 6.914, p = .032). However, doctors who graduated in the EEA were more often complained about for lack of compliance with the GMC (χ²(2) = 16.617, p < .0001). There were no significant differences between groups of doctors for other allegation types; however, it is noticed that other characteristics, such as enquiry type, doctors age, gender, etc. are also important factors when analysing the differences in the allegation type among IMG, EEA and UK graduates. More detailed analysis will be presented in the conference.

Discussion:
This study observed the differences in the types of complaints made against doctors trained in the UK and outside. Generally, IMG doctors are more often subjected to Fitness to Practice investigations and are more often referred for clinical issues while EEA graduates have increased odds to be investigated for compliance with GMC issues. The investigation of allegation type can help to better understand the challenges experienced by certain groups of doctors and identify interventions to mitigate negative outcomes for doctors.

References:

Ref: 120, Wednesday 11th July, 5.20-5.40pm, C2
Empathy, fake empathy & how to make the empathetic statement - the views of simulated patients
W Laughey, N S Grandal, G Finn
Hull York Medical School (HYMS)

Background:
An empathetic approach is one of the tenets of patient-centred consulting.(1) Although widely advocated in models of the consultation, there is evidence to suggest that physicians frequently miss opportunities to empathise with patients.(2) The teaching of communication skills, including empathetic skills, frequently involves simulated patients (SPs), both in undergraduate and postgraduate settings.(3) Despite the central role SPs play in the teaching of consultation skills there is little research around their views on that makes for good medical communications. The qualitative study aims to address this gap in the literature and this poster reports the findings on empathy and empathetic statements.

Methodology:
18 SPs from two medical schools – HYMS & Durham – were interviewed, using an in-depth, one-to-one, semi-structured approach. Data, transcribed verbatim, were thematically analysed. The results around empathy, fake empathy and how to make an effective empathetic statement were addressed for this presentation.

Results:
There were three main findings relating to empathy. First, the terms empathy and listening were used interchangeably, both were facilitated through the same non-verbal communication, especially eye contact. It seems the student who listens well, is already some way down the road to demonstrating empathy. Second, whilst empathetic statements were generally welcomed, hollow or fake statements of empathy were easy to detect and could be irritating to patients. Third, for an empathetic statement to be sincere, words need to be accompanied by appropriate non-verbal communication, like a concerned expression: without this, words did not ring true. Indeed, non-verbal attributes like silence, or a faint smile of recognition, were felt to be more empathetic than the use of words in some instances.

Discussion:
Arguably SPs are well-placed to offer advice to students and doctors looking to cultivate a more empathetic style: in their training and work as actors SPs develop expertise in putting themselves into the shoes of others through the act of building a character.(4) The psychologist Carl Rogers indicated that for therapists to have empathy for clients they needed to actively listen and then feedback thoughts and feelings.(5) This link between listening and empathy was implicit in the SP data. Indeed, SPs used the terms so interchangeably that often it was difficult to find clear water between them: they shared the same non-verbal attributes and it seems reasonable to suggest that an obvious way to appear empathetic is to listen attentively.

SPs generally welcomed the empathetic statement. However, their qualification that fake statements of empathy are easy to identify is supported by a more philosophical inquiry into the nature of empathetic connection. Davis argues that empathy is akin to a process of ‘crossing over’ in which a person suddenly finds they are closely aligned to another, a crossing that simply happens when the conditions are right and that cannot be forced.(6)

The specific advice from SPs that a genuine empathetic statement needs to be accompanied by appropriate non-verbal communication – such as a concerned expression – is new to the medical communication literature. It does however have backing from research indicating that when verbal and non-verbal signals are in conflict with each other – for example, saying ‘that must be hard’ with no eye contact and a grin – it is the non-verbal message which prevails.(7)

Current literature concentrates on the importance of making empathetic statements rather than the specifics of how to make them, or indeed the wisdom of avoiding them when they are insincere. For example, the four habits model simply advocates that physicians make at least one empathetic statement.(8) The spirit of this advice may be correct, but the novel message from SPs indicates that students should be wary of forcing the empathetic moment.

References:
5. Roger CR. Client-centered therapy: its current practice, implications and theory. Houghton Mifflin; 1951
6. Davis CM. What is empathy, and can empathy be taught?. Physical therapy. 1990 Nov 1;70(11):707-11.
Medical students’ views on communication skills in undergraduate paediatric medical education: A qualitative study
A Willis, J Thompson
University of Sheffield

Background:
Communication with children and their families has long been recognised as challenging, and there is a lack of research examining undergraduate paediatric communication teaching. The aim of this qualitative project was to explore medical students’ views of their experiences regarding paediatric communication skills, with a focus on children with long term conditions.

Methodology:
Nine medical students were interviewed in two focus groups. Participants were recruited on the medical schools’ online platform and via social media. The topic guide was developed with reference to the literature review. The focus groups were audio-taped, transcribed and analysed using the Framework Approach.

Results:
Four meta-themes emerged including medical students perceptions of how they learn paediatric communication skills, where they perceive the learning to happen, their concerns, and what they would like to be taught. Medical students described learning when being observed, observing other doctors, through role play and also outside of medicine. Only one role play scenario was related to paediatrics, and the students felt it was directed at managing an angry patient, rather than working with a parent. They generally felt that there was little formal teaching from the medical school, but understood that experience in practice was important.

Students felt they learnt while clerking patients, in paediatric clinics and in general practice consultations. An assessed long-case was an opportunity for students to have in-depth discussions with families. The students also discussed a placement based assessment with differing opinions on its value regarding communication skills.

Difficulties included not wanting to upset children, with an awareness of needing to protect children, the triangular consultation and being apprehensive of parents, and meeting their expectations.

Students wanted more role play involving paediatric cases, and more direct feedback on communication skills.

Discussion:
This research explored medical students’ views of their education in paediatric communication skills. A key finding was medical students not appreciating the extent of training in the curriculum, and agreed with the literature that paediatric communication skills for undergraduates is an underdeveloped area. Recommendations for improvement include increased role-play, the introduction of ‘Parents as Educators’, and increasing the formal teaching for paediatric specific skills.

References:

Ref: 059, Friday 13th July, 9.20-9.40am, Sage 1
Modern Slavery: Recognition and Response
M Selous, E P Metcalf
Cardiff University

Background:
Working with colleagues in the Welsh Anti-Trafficking Network- Regional Anti-Slavery for a (1), we have developed a novel training package on modern slavery for medical, nursing and midwifery students. The primary aim of this training is to equip healthcare students to be able to recognise signs suggesting a patient is a victim of exploitation or slavery and be able to confidently respond and safeguard that patient. To our knowledge, this is the first training that has been integrated into the undergraduate curriculum and has received excellent student feedback with 93% supporting its compulsory inclusion in the curriculum. Moreover, within 3 weeks of receiving this training, a medical student was the sole person on a hospital placement to identify and raise concerns regarding a patient who a victim of sex trafficking. The Modern Slavery Act (2) and General Medical Council (3) place both legal and professional duties on healthcare professionals to be able to recognise and respond to situations of modern slavery.

Methodology:
The training lasted 1 hour 30 mins and involved:
1. Small group Interactive seminar (1hr): introduces what modern slavery is, what the signs are and what to do for both adults and children if you suspect a patient is a victim of modern slavery.
2. Communication Skills scenario (30 mins): a clinical scenario with actors giving students the opportunity to practise eliciting signs suggestive of exploitation and communicate with a potential victim in a manner that prioritises their safety.

We asked all participating students to complete an evaluation form following the teaching in order to assess participants’ views of how important the subject area is and whether the teaching improved their knowledge and ability recognise and respond to potential cases of modern slavery appropriately.

Results:
Evaluation forms were completed by 141 students. 94.3% of students felt that modern slavery teaching should be compulsory in the undergraduate medical curriculum. Qualitative feedback from students identified how students felt the content of the teaching was highly appropriate and timely for final year students. They also felt that the interactive lecture and opportunity to role play in a communication skills workshop setting ideally suited the challenging nature of this field.

Discussion:
Modern slavery is a topic of critical importance to medical education given that 1 in 5 healthcare professionals will treat a victim of modern slavery (4). This project has demonstrated the effectiveness and suitability of the mode of delivery, giving students the opportunity to rehearse and receive feedback in a low risk teaching environment. Furthermore, it has demonstrated that undergraduate medical students can be equipped with the necessary communication skills required to recognise victims of exploitation and respond safely and appropriately.

During the first half of 2018 we will be undertaking a pilot project as part of a 4th year undergraduate SSC (Student Selected Component) project, sharing and disseminating this teaching into the wider healthcare undergraduate curricula. The teaching package will be adapted to fit the needs of the more diverse learners and we will evaluate the impact of the session.

References:

Ref: 288, Friday 13th July, 9.40-10.00am, Sage 1
Communication Skills

Not seen, not heard, not understood: What effect does teaching on hearing and visual impairment and interpretation services have on Foundation doctors’ confidence?

R Anderson, N King, E Moseley, J Watson, P Fletcher
Gloucestershire Hospitals NHS Foundation Trust

Background:
Communication in medicine can be challenging, not least when doctors are required to speak to patients with hearing and visual impairment. Over two-million people in the UK have a degree of visual impairment1 and eleven-million people have hearing loss2. Doctors encounter these patients daily. Additional challenges arise when doctors are faced with patients who do not speak English. Sadly, people who are not proficient in English have inferior health to their English-speaking counterparts3. Doctors should be competent to communicate with hearing and visually impaired patients and adept at using interpretation services. Unfortunately, there is a dearth of evidence on this subject, and it is not routinely taught at medical school or in post-graduate education. This study looks at whether teaching on communication with deaf and blind people, and training on interpretation services, affects Foundation Year 1 (F1) doctors’ confidence in these areas.

Methodology:
A 1-hour teaching session was designed and delivered to F1 doctors at Gloucestershire Hospitals NHS Foundation Trust. The teaching was provided by trainers with experience of communicating with the deaf and blind, and with those who do not speak English. It involved a review of basic approaches to people with disabilities and also covered available resources such as the Hospital Communication Book4, and local interpretation services. The F1 doctors completed a pre- and post-teaching questionnaire asking them to rate their confidence at communicating with these patients and using interpretation services. This was rated from 1 (not confident) to 5 (extremely confident).

Results:
17 F1 doctors completed the questionnaires.
Prior to the training, confidence self-ratings for communication with hearing impaired patients ranged from 1 to 4 (1 rated 1, 3 rated 2, 9 rated 3, 4 rated 4 (Mean 2.94, Median 3). After the teaching session the range was from 3 to 5 (5 rated 3, 11 rated 4 and 1 rated 5 (Mean 3.76, Median 4).
Prior to the training, confidence self-rating scores for communication with visually impaired patients ranged from 2 to 4 (4 rated 2, 8 rated 3, 5 rated 4 (Mean 3.06, Median 3). After the teaching session the range was from 3 to 5 (8 rated 3, 8 rated 4 and 1 rated 5 (Mean 3.59, Median 4).
With regard to confidence using interpretation services, the pre-teaching self-ratings ranged from 1 to 3 (6 rated 1, 7 rated 2, 4 rated 3 (Mean 1.88, Median 2). The post-teaching self-ratings on this topic ranged from 2 to 5 (1 rated 2, 3 rated 3, 9 rated 4 and 4 rated 5 (Mean 3.94, Median 4).
All delegates evaluated the teaching as ‘very good’ or excellent’.

Discussion:
This study suggests that teaching an approach to communication with patients who suffer from visual and hearing impairment can increase F1 doctors’ confidence. It has recently been shown that deaf patients often feel disempowered, vulnerable and discriminated against when admitted to hospital5. Incorporating training into F1 doctors’ teaching programmes could improve standards of care and address some of the hurdles faced by those with sensory impairment.
Of the F1 doctors who attended the session, none had previously utilised the Hospital Communication Book, and most felt under-confident at using hospital interpretation services. Again, after a brief training session, confidence in this area had increased. Surely more emphasis should be placed on better training for junior doctors in a drive to offer equal access to, and quality of, healthcare for patients from all backgrounds?
The post-training questionnaire revealed that all F1 doctors rated the session as ‘very good’ or ‘excellent’. It seems they embraced this area of learning, likely because it is contextually relevant to their everyday practice and something that, previously, they have found challenging. In future, it would be interesting to review whether teaching on this subject leads to improved satisfaction of patients with sensory impairment or of those who do not speak English.

References:


Ref: 084, Friday 13th July, 10.00-10.20am, Sage 1
Communication Skills

S Holmes
Newcastle University

Background:
A vital step in learning communication skills is practice with feedback [1], which compares learners’ performance against a desired standard and provides advice on how to close the gap [2]. The Pendleton approach is well-known and widely practised. However, the agenda led outcomes-based approach (ALOBA) [3] presents several advantages, in that it focusses on learners’ goals and explores the specific steps needed to achieve them [4]. My aim with this inquiry was to explore the impact of feedback models on preclinical students’ experience. Preclinical students are often unfamiliar with clinical skills and benefit from explicit guidance and reassurance. The data I collected were qualitative in order to reveal students’ subjective experience. Through contrasting two feedback models, Pendleton and ALOBA, I hoped to generate discussion in two areas: do my students find feedback models useful and why is this the case? Do my students prefer the Pendleton or ALOBA framework and what factors underpin their preference?

Methodology:
As a clinical teaching fellow, I deliver regular history-taking practice sessions for preclinical students. My inquiry took place over two sessions on gastrointestinal presentations. Six students attended each session. I divided each 90 minute session into two sections of 45 minutes each. During one half of the session, I used the Pendleton model to give feedback. During the other half, I used the ALOBA model. All 12 students chose to participate in the 10 minute focus group at the end of the session. I facilitated this discussion using open-ended questions and explored the students’ replies in depth. The discussion was recorded on a mobile recording device. The transcript was processed using simple content analysis. After identifying and grouping key phrases, I drew these categories into a framework, striving to maintain authentic representation of my participants’ attitudes and experience. Prior to the inquiry, ethical approval was obtained from Newcastle University.

Results:
All students found structured feedback useful for improving performance. The students were divided in their preference for the Pendleton or ALOBA model, with a slight majority favouring the Pendleton approach. I was able to draw out three ingredients for effective feedback. Firstly, context: a structured approach is valued and a supportive environment is seen as essential. The praise and encouragement typified in the Pendleton model makes the process ‘less hard on the person receiving the feedback’. Secondly, contributors: students value being engaged in the feedback discussion. However, they see input from others as essential in providing a ‘better overview’. Finally, the conclusion: the discussion should be constructive, balancing praise and criticism. A feed-forward conclusion should be drawn, emphasising practical steps for improving future practice.

Discussion:
The three ingredients for effective feedback align with existing theory. The need for input from the learner echoes Rogers’ advocacy of self-direction and self-actualisation [5]. Input from external observers addresses the inaccuracy of self-assessment [6]. The need for a feed-forward conclusion fits with Nicol’s guidelines on effective feedback, which emphasise a ‘culture of improvement’ [2]. The Pendleton model is particularly helpful in establishing a conducive context for learning, through creating a supportive environment and providing a transparent structure. The ALOBA model, on the other hand, is intensely goal-directed. After my inquiry, I predict that the Pendleton model will work better for less experienced students and the ALOBA approach for students who are more competent, an observation which I will explore in future teaching. This small inquiry is of interest in comparing our current understanding of feedback against qualitative data. It also demonstrates the benefits of practitioner inquiry and qualitative methods in order to obtain rich and authentic insight into students’ experience.

References:
Learning to mentor and involvement in mentoring activities: Impacts on Drs health and wellbeing
A Steven, V Larkin, J Stewart, G Wilson, N Redfern
Northumbria University

Background:
There is a strategic focus upon the health and well-being of healthcare professionals perhaps because ‘without strong employee well-being, employee engagement declines, retention suffers, and motivation and performance are affected’ 1. The NHS is undergoing organisational transition, within an environment of financial restraint and increasing levels of professional accountability2. Such change increases demands on, and stresses for, its employees. Reports consistently highlight work-related challenges impacting upon NHS staff and doctors’ work-life balance, morale and stress levels 3- 6. To enhance individuals’ response to workplace stresses and pressures, and to improve well-being, the use of workplace support mechanisms such as mentoring are advocated7. There is a growing literature 8-11,12 suggesting being involved in mentoring programmes carries benefits. While research has explored organised mentor-mentee activities and highlighted roles, functions, benefits and challenges 10-14 there is a lack of focus on doctors who have attended mentor training, how skills and knowledge are then enacted and the impact on doctors’ health and well-being. Whilst there are many types of mentoring the approach used in the initiative studied is based upon the Egan14 skilled helper model and does not rest on notions of a senior-protégé relationship

This BMA funded study aimed to explore the relationship between engagement in mentoring activities by doctors who have attended mentor development courses and doctors’ health and well-being.
The study comprised 3 stages: literature review; questionnaire; longitudinal case studies. This presentation will focus on findings from the case study element which tracked mentors over approx. 2 years, to develop a detailed ‘real time’ picture of mentoring activities and impacts.

Methodology:
The study drew on principles of Realistic Evaluation15 and was based upon the view that education and support activities are complex, context bound, social processes.
Initial participants included 13 UK doctors who had attended mentor development courses within previous 2 years. Data collection drew on the BITC model and findings from stage 1&2 of the study and compromised 1:1 interviews at 4-6 month intervals (tot n=40).
Iterative thematic analysis16 drew on realistic evaluation principles15 and the BITC Workwell Model17 acted as a heuristic framework assisting systematic data analysis. The software NVIVO was used to assist data management and for audit trail purposes. Analysis by individual researchers followed by team discussions ensured findings were grounded in the data.

Results:
Findings from the case study interviews will be reported including: how participants enacted mentoring across formal sessions and in work situations; the range of threats to wellbeing identified; issues dealt with; frequent and infrequent health and wellbeing outcomes and impacts. Case exemplars will be used to illustrate findings.

Discussion:
Findings suggest that mentoring activities offer a range of health and well-being benefits to doctors- both mentors and mentees. Mentorship supported better professional and personal wellbeing by enabling and enhancing: the ability to respond to wellbeing threats; insight into issues influencing professional and/or personal wellbeing; constructive responses suggesting development of resilience strategies; role fulfilment and satisfaction. Only a few examples of negative impacts for mentors were reported. Participants discussed existing practice communities and culture, suggesting mentoring could mediate unsupportive contexts, enhance culture, community and ultimately patient care. Although contextual factors, particularly funding and time constraints played a role in the ability to initiate and engage in mentorship activities, mentoring is proposed as a vehicle for better work, through specialist support which enhances relationships, physical and mental health and the development of supportive cultures and communities.

References:

Ref: 393, Friday 13th July, 10.00-10.20am, C19
Core curricula for UK medical undergraduates: a scoping review of literature and current status
M Sharma, R Murphy, RS Patel, GA Doody
Medical Education Unit, University of Nottingham, School of Medicine, Nottingham, UK

Background:
The General Medical Council (GMC) in UK, based on a review of curriculum theories, its relevance and context to medical education and its stakeholders defines a curriculum as a statement of the intended outcomes, encompassing content, teaching, learning and assessment methods, feedback and supervision as part of the educational programme.(1) Though GMC recommends a ‘core curriculum’ for undergraduate medical education, medical educators have found it challenging to define what is meant by core, what needs including and its relevance in larger context of graduating medical students.(2,3) This means having to define a core curricular framework with minimum standards of knowledge, skills and competencies for a medical graduate. UK currently has no unified or standardized undergraduate medical curriculum with schools organising their curricula based on Outcomes for Graduates of the General Medical Council (GMC).(4) These learning outcomes could be viewed as generic. Various specialities have expressed concerns that their core curricula are not being represented, taught or implemented in medical schools and have developed their individual curricula. This scoping review sets out in the first instance to identify the specialties or subjects which currently recommend and have developed an undergraduate core curriculum for UK medical schools. The review seeks to establish the drivers for these developed curricula, emerging themes and gaps as well as future approaches to curricular development.

Methodology:
We performed a scoping review, using the methodological framework as outlined by Arksey and O’Malley to map the key concepts of undergraduate medical curriculum.(5)
A literature search was conducted using online databases (EMBASE, MEDLINE, ERIC, HMIC, PubMed and CDSR) and online search engines (Google & Google Scholar, Department of Health, GMC and BMA) for relevant articles from 1996 to May 2017 (i.e. past 20 years). Online resources and search engines were assessed between 01/03/2017 and to 19/05/2017. Inclusion criteria: All published studies, reports or articles which had a recommended core curriculum for a specialty or subject for UK medical undergraduates on a national level were eligible. Any national body, society, college or organisation specific and pertinent to UK medical undergraduates were included.
Exclusion criteria: Articles pertaining to core curricula for postgraduate courses and those not specific to UK medical undergraduates.

Results:
Of a total of 1267 articles, 30 articles were included in the qualitative synthesis which comprised of 26 specialties or subjects included in the final review which had developed a national curriculum for UK medical students. Organisations involved in their development included European specialty bodies, Royal Colleges of UK, Specialist National Societies or Associations, to Specialist Consultant bodies. Of the 26 included specialties, 17 curricula were aligned to clinical specialties, 6 were on foundation subjects while 3 topics were related to professionalism.

Discussion:
The drivers for development of specialty specific core curricula ranged from patient safety concerns, burden of disease to societal needs. Developed specialty core curricula with overlapping conditions and diseases could be aligned to reduce content overload and keep learning and teaching contextual. Generic core curricula relevant to all specialties (e.g. communication skills) could form a framework through the entire medical course. The use of specialty specific standards may help provide quality assurance of the ‘core knowledge’- the key aspect for curricular development in medical schools.(6)
This study provides the first comprehensive overview of the available national core curricula developed for specialty specific and general professional skills in UK. The undergraduate curricular guidance from European, national and regional bodies, reflect the need for UK medical schools to align and revise their curricula to recommended standards.

References:
Delivering to ‘that list’: The challenges of working with Learning Outcomes
H Bateman, G McCracken, J Ellis, J Stewart
School of Dental Sciences, Newcastle University, UK

Background:
The General Dental Council (GDC), as the regulator of dental professionals in the UK, has responsibility for the quality assurance of UK training programmes. To this end, they publish documents outlining the requirements for education and training. One such document, ‘Preparing for Practice: Dental team learning outcomes for registration’(1), contains outcomes for which attainment must be demonstrated. The outcomes for each profession within the dental team are presented under four domains: Clinical, Communication, Professionalism, Management and Leadership. The overarching aim of this study was to critically review the applicability of this prescribed list to the clinical education context.

Objective
From the perspective of the education provider, to identify the challenges to attaining the ‘outcomes’ of the ‘Professionalism Domain’ within the ‘Preparing for Practice’ document for Dentists.

Methodology:
Using documentary analysis techniques(2), each ‘outcome’ was reviewed to judge whether it met the criteria of a functional learning outcome: its clarity of meaning, explicit reference to a level of cognitive, psychomotor or affective attainment and its compatibility with existing assessment processes. In addition, the outcomes were considered in terms of whether there were any challenges to their application within undergraduate degree programmes.

Results:
The key challenges identified were:
• The ‘outcomes’ were written in the style of standards and objectives as well as outcomes;
• There was a combination of specific and focused but also broad and multi-faceted ‘outcomes’;
• ‘Outcomes’ could lack tangible end-points and others had no obvious means to assess attainment. Assumptions were therefore needed to judge achievement;
• For aspects of professionalism, achievability was questionable within a supervised environment and within the confines of an undergraduate programme.

Discussion:
The Professionalism outcomes presented in the GDC document create challenges to those wishing to ensure their success at an undergraduate level. Some of these issues are caused by the style of presentation but also evident are more ideological and philosophical issues about accurately articulating attainment of complex educational phenomenon. These findings reflect aspects of the challenges associated with curriculum design and management of professionalism and mirror the experiences of clinical educators. Given that the purpose of this documentation is for quality assurance across all dental education providers, this study identifies a risk that the quality of the learning outcomes could, themselves, result in differing interpretations. By being unclear, the outcomes ultimately defeat the purpose of having a standardised document for all providers of dental education. The findings also suggest that the format of ‘learning outcomes’ may not be the most appropriate way to present the regulator requirements for professionalism in the new graduate. We suggest alternate formats should be considered.

References:
Evaluation of an innovative undergraduate longitudinal placement for 2nd year medical students in General Practice.
L Kirtchuk, N Jakeways, A Wylie, A Stephenson
King’s College London

Background:
The UK is experiencing a shift in healthcare provision towards primary and community care settings to meet the challenges of a growing and ageing population, with more long-term conditions and co-morbidity (1, 2). Traditional block placements in undergraduate medicine, which lead to short-term, opportunistic exposure to acute episodes of care/illness, align poorly with this trend towards holistic community care. Longitudinal undergraduate placements (regular, recurrent placements in the same setting with the same supervisor (3)) can address these limitations and are gaining traction internationally (4). Positive outcomes include the development of trust and professional relationships between students and their tutors, patients, peers, and the practice (3). The student role becomes more established as part of the community of practice, enabling improved participation which is sensitive to the student’s competency. An enhanced understanding of the impact of illness and health is gained, enabling the student to develop rapport and compassionate care (3).

Concurrently General Practice (GP) recruitment is sub optimal (1, 2) and there are concerns regarding the attrition rate of the current workforce (5). Optimal exposure during undergraduate years is believed to enhance the likelihood of GP as a career destination (5) and strong recommendations have been made that GP should be promoted more vigorously in medical schools, through a greater exposure to the speciality and positive role models (6).

Our GP longitudinal placement aims to increase exposure to GP in the early years, with the benefits of longitudinal delivery. The programme commenced in September 2017, with all 400 2nd year medical students at King’s College London (KCL) spending a day a week in GP, for a total of 30 days over the course of the year.

Methodology:
We have taken an Action Research approach to evaluation, using an interpretivist lens. This has involved student focus groups, field notes from tutor development events, faculty reflections, relevant documentary analysis, surveys about student career intentions and GP tutor job satisfaction.

The data is being coded independently and reviewed collaboratively for similarities and emerging themes with the help of Nvivo. Findings will be used to develop the delivery of the curriculum further and to inform the next steps of the evaluation.

Ethical approval has been granted by KCL.

Results:
Preliminary data analysis shows core themes that include valuing the longitudinal relationship between student and tutor/practice; valuing continuity with patients; legitimisation of the student role within the community of practice; and valuing the importance and complexity of General Practice.

However, the delivery of a new and complex placement has given rise to challenges regarding standardisation across diverse placements; tutor recruitment and support; the need for appropriate scaffolding for junior students with no prior clinical experience; and how this is managed by tutors and faculty.

Discussion:
The first stage of our evaluation demonstrates success in meeting the core goals of an innovative longitudinal GP placement. The findings will inform development of the programme as part of an ongoing cycle of action research. Key areas of focus include tutor retention, sustainability of delivery, parity of student experience, quality assurance, and insights into the dynamics of this placement within the ecosystem of each GP setting.

References:

Ref: 400, Thursday 12th July, 2.40-3.00pm, C19
Improving patient safety by enhancing raising concerns at medical school; a curriculum review
N Malik, I Gafson, N Gostelow, J Kavanagh, A Griffin, F Gishen
University College London

Background
Doctors and medical students have a professional responsibility to raise concerns. Failure to raise concerns by healthcare workers may compromise patient safety. Raising concerns as a tool for improving patient safety has been researched amongst qualified doctors, but whilst medical students frequently encounter unprofessional behaviours [1-11], little is known about the barriers to and the culture of raising concerns amongst medical undergraduates, which this study was first to address.

Purpose
To ascertain the opinions and experiences of medical students relating to raising concerns. This data was then used to improve the raising concerns curriculum and access to the raising concerns system in order to fundamentally improve patient safety and the patient experience, as well as the student experience.

This paper explores these issues and discusses some innovations in the medical undergraduate curriculum, offering a good practice model for other medical and healthcare curricula.

Methodology:
This work was led by a final year medical student in conjunction with Faculty. A university student-staff collaboration faculty development grant funded the work. Ethics was obtained through the local research ethics committee.

We wanted to ascertain the opinions and experiences of medical students relating to raising concerns. The authors conducted a mixed methods quantitative and qualitat ive research study over a nine month period. Research was based at a UK medical school and involved data collection using an anonymous, voluntary survey distributed to all medical students (replies n=363) and voluntary attendance focus group work (n=24) recruited to by email. Both tools investigated student attitudes towards raising concerns and explored student ideas for solutions to improving the process and their engagement. The focus group data was thematically analysed by three researchers.

Results:
The authors identified five key themes which described medical student opinions on raising concerns (process of raising concerns, nature of raising concerns, barriers to raising concerns, suggestions for improvement, and parallels to the NHS).

Barriers to raising concerns fell under the following;
1) Comprehension; understanding when it is appropriate to raise a concern and how to do so
2) Conviction; understanding why it is important and recognising this as a moral responsibility
3) Courage; having the resilience to overcome fear and manage oneself in a situation where a concern is raised.

The data was used to improve the raising concerns curriculum and access to the medical school raising concerns system, with the aims of improving patient safety, the patient experience and the student experience.

We adapted our raising concerns curriculum by embedding small group work (year 1), a lecture (year 4) and a Schwartz Round (year 5); a large confidential reflective practice forum to discuss the emotional aspects of healthcare.

Feedback from the interventions were used to assess an improved culture around raising concerns in the medical school.

Discussion:
Failure to raise concerns by healthcare workers may compromise patient safety. This research explores these issues in medical students and discusses some innovations in the medical undergraduate curriculum, offering a good practice model for other medical and healthcare curricula. Despite being a single study in one UK medical school, we propose changes which may inspire other educators to build upon their raising concerns curricula to foster more transparent undergraduate cultures and ultimately improve patient experience and safety.

References:

Ref: 401, Thursday 12th July, 3.00-3.20pm, C19
The Core Anatomy Syllabus for Pharmacists – A Delphi Study to Create a Foundation for Clinical Practice
G M Finn, G Hitch, B Apampa, CM Hennessy, PR Gard, J Stewart, CF Smith
Hull York Medical School

Background:
To date, there has been no published standardised anatomy syllabus for students studying for a Masters in Pharmacy (MPharm) in the United Kingdom. The requirement for such a syllabus has never been more pertinent given the evolving clinical roles for pharmacists in the NHS as members of multidisciplinary teams and the General Pharmaceutical Council’s standards for the initial education and training of pharmacists (1,2). All Health professionals, including pharmacists, must be able to relate form to function: a grounding in anatomy is an essential foundation on which to underpin other knowledge relevant to clinical practice, as well as other basic sciences studied as part of the Masters in Pharmacy (MPharm) Degree programme. A standardised syllabus enables institutions to map their curricula to a standard which is comparable nationally. Within the UK, the MPharm degree programme is accredited by the General Pharmaceutical Council (GPhC), the professional regulatory body for pharmacists. The Programme is based on predicted objectives and standards for the students, set by the GPhC. The outcomes state that students require knowledge of ‘normal and abnormal structure and function’ and lists ‘Anatomy and Physiology’ as an area for competency within it (1,2). Similarly, the British Pharmacological Society (BPS) published a recommended pharmacology syllabus for pharmacy courses (2015) which indicates that anatomical knowledge is required for clinical practice. The BPS does not specify outcomes for anatomy but alludes to it within its competency statements in life sciences (3). The present study therefore aimed to confirm the anatomical knowledge a graduate should have in order to safely practice in Pharmacy and its associated sub-disciplines, using a modified Delphi approach.

Methodology:
The Delphi approach was employed to seek consensus on which learning outcomes should be included in such a syllabus. The Delphi method was modified as the research utilised an existing framework (of published learning outcomes rather than a blank canvas; The framework consisted of two iterations of the Anatomical Society’s core syllabus for regional anatomy in undergraduate medicine developed from McHanwell et al., 2007 and Smith et al., 2016 (3,4). A Delphi panel was constructed involving ‘experts’ (individuals with experience of teaching pharmacy students anatomy). Members of Council of the Anatomical Society nominated the panel members. The resultant panel consisted of 34 experts. The research team performed an initial screen of outcomes within the framework to remove outcomes that were obviously not applicable (n=10) – these typically related to clinical procedures. The Delphi panel completed the process online using the Survey Monkey platform. The experts were asked in two stages to ‘accept’ or ‘reject’ each learning outcome – stage one allowed for modifications to outcomes. A final formatting was performed by the research team to standardise presentation, make changes either to correct any anatomical or minor syntax errors. The approach was based on previous work by the Anatomical Society (6).

Results:
In the Stage 1 163 outcomes were presented to the Delphi panel. 53 outcomes remained after stage 1. Following stage 2, 50 learning outcomes formed the final syllabus. All learning outcomes on the new core syllabus achieved over 80% acceptance by the panel. Each stage allowed participants to comment on the outcomes. 477 comments were made during stage 1. Of these, 65% were modifications, 22% supportive, 7% contextual and 6% deemed irrelevant. Stage 2 comments totalled 103, of which 52% were supportive, 24% modifications, 14% contextual and 10% irrelevant.

Discussion:
We present the first core anatomy syllabus for MPharm graduates consisting of 50 learning outcomes. It is a conceptual building block from which the anatomy for pharmacists can be developed, as well as a physical document for use and development by stakeholders in Pharmacy - from students to accrediting bodies.

References:
Transition to qualified clinician: do smartphones hold the answer?
J Shenouda, B Davies, I Haq
Brighton & Sussex Medical School

Background:
The transition from medical student to junior doctor is one of the most difficult in medicine. Particular challenges include frequent rotation around new working environments, new responsibilities and the reality of inexperience; affecting both doctor and patient health. Despite the greater level of responsibility placed upon final year students, junior doctors still feel unprepared when it comes to decision making, roles within the medical hierarchy and performing under stress. Responsibility transitions faced by foundation trainees are often seen as problematic but performance in such critically intense learning periods is not merely the responsibility of the doctor, but of the institution and workplace [1]. Opportunities to support this transition have arisen from advances in mobile technology and increased smartphone ownership.

Methodology:
This qualitative study consisted of six in-depth interviews and two focus groups with Foundation Year 1 Trainees and final year medical students within the same NHS Trust. A convenience sample of 14 participants was recruited using chain sampling. An interview schedule was devised on the basis of an initial literature review and following discussion between the authors. The schedule was refined over the course of the interviewing period to explore emerging themes from existing data. The number of interviews conducted was determined by data saturation on the major themes. Permission from gatekeepers of both cohorts and informed signed consent and was obtained before every interview and focus group. Interviews and focus groups were recorded, transcribed verbatim and analysed independently by JS and BD in accordance with thematic analysis.

Results:
Participants used their smartphones to support prescribing practices through applications, especially for antimicrobials. Features of such applications, which were deemed particularly useful, included: not requiring internet access, convenience and being trust-specific. Instant messaging complemented the existing bleep system, allowing coordination of both work and learning opportunities across place and time. However, such frequent communications resulted in struggling to “switch off” when not at work, impacting on trainees’ work-life balance. Clinical photographs were recognised as being against regulations but there had still been occasions of use despite this when pressured by seniors. Concerns about appearances were important to both medical students and doctors, but participants described various tactics employed to successfully integrate phone use into their practices.

Discussion:
Trust-specific antimicrobial applications have the potential to reduce prescribing errors. This is especially relevant in the current era of antimicrobial stewardship and the 2016/17 national CQUIN goals [2]. Though participants represented both high and low intensity users, most acknowledged multiple modes of communication facilitated increased clinical efficiency possibly at the expense of interruptions. Clinical photography has great potential but at present risks confidentiality without strict regulation. Fear of public perception remains the biggest hindrance of smartphone use in the workplace. This study suggests that both final year medical students and foundation trainees use smartphones in everyday practice. Medical schools and healthcare institutions should seek to integrate smartphone use into core curricula/training to enable safe and effective use and further ease the transition to foundation training.

References:

Ref: 050, Friday 13th July, 9.20-9.40am, C19
What is an integrated curriculum?
A Kerr, H O’Connor, P Gallagher, T Pawlikowska, J Strawbridge
RCSI

Background:
Schools of Pharmacy in the Republic of Ireland have introduced 5-year integrated pharmacy programmes. The rationale was that an integrated model is currently regarded as the optimum way of achieving a clearly defined set of educational outcomes to ensure the competence that underpins public and patient safety(1). Integration may be viewed as a creation of wholeness(2), however, it is challenging to define. It may be described as horizontal or vertical, and is more than a sum of parts(3). Harden’s ladder describes integration as a complex continuum of 11 points with teaching unlikely to all occur at the same point on the ladder(4). This scoping review asks: what is meant by integration in curriculum design for pharmacy education? We draw on the wider healthcare professions education literature to inform the perspective in pharmacy.

Methodology:
Keyword searching was carried out in Ovid MEDLINE, EMBASE, Scopus, Web of Science and ERIC. Titles and abstracts were screened independently in duplicate by 2 authors. Research papers were eligible for inclusion if they contained details on curriculum integration in any healthcare professions education.

Results:
5594 titles and abstracts, following duplicate removal, were screened for relevance. 682 papers proceeded to the full text screening phase and all studies included after this stage proceeded to data extraction.

Discussion:
We intend to provide a summary of the various types of curricular integration and highlight any patterns in interpretations or definitions of integration and how these apply to pharmacy.

References:
4 Harden R. The integration ladder: a tool for curriculum planning and evaluation. Medical Education 2000;34(7):551-57

Ref: 018, Friday 13th July, 9.40-10.00am, C19
Enhancing basic neuroscience learning in the multidisciplinary environment: a novel computer-assisted-learning package using virtual cases
K Rajan, A Guni, C Burford, A Pandit
King's College London, Strand, London, WC2R 2LS, United Kingdom

Background:
Neuroscience is a challenging and intimidating subject for medical students and doctors [1,2]. A key factor for ‘neurophobia’, is the lack of integration between basic neurosciences and clinical neurology [3]. Indeed, a strong grasp of the underpinning neuro-anatomy and physiology is essential to understanding and managing neurological and neurosurgical patients. Since clinical management involves healthcare staff from a range of disciplines, a good understanding of neuroscience would be beneficial to all. Computer-assisted-learning (CAL) and interactive virtual cases are useful teaching aids in medical education [4]. We present a novel CAL package, which integrates virtual cases to enhance learning of fundamental neuroscience concepts.

Methodology:
Three neuroscience eModules were designed in Articulate-Storyline 360 with multi-disciplinary input and the assistance of a learning technologist. Topics were chosen for their difficulty and included: stroke and cerebrovascular anatomy; raised intracranial pressure and cerebrospinal fluid physiology; and cerebellar disorders - their pathophysiology and posterior fossa anatomy. The eModules were mobile and tablet (iOS/Android) accessible. Virtual cases were based on real patients, and included relevant clinical and imaging findings with interactive questions to engage users. One eModule: stroke and cerebro-vascular anatomy was trialled here as a pilot to assess learning potential. Fourteen volunteers were recruited from a university teaching hospital to trial the CAL package, including medical students, nursing staff, primary care, internal medicine and neurosurgical trainees. Prior neuroscience experience ranged from limited undergraduate exposure to postgraduate qualifications. Participants completed pre- and post-module quizzes on the taught topic and a short objective and qualitative survey.

Results:
On average, participants completed the eModule in 44 minutes. Participants rated the eModule highly: scoring 9.1 (SD+/−1.3) as an aid to learning, 8.7 (SD+/−1.1) in clinical usefulness and 7.7 (SD+/−1.2) in enjoyment (all measured on a 0-10 scale). Average pre- and post-module quiz scores were 6 and 8.3 respectively, with a significant improvement between the two (p<0.001, paired-samples T-test).

Discussion:
These preliminary results demonstrate that our innovative CAL package was comparable or better than similar previous studies [5,6,7]. The eModule’s interactivity and graphics were specifically identified as making the neuroscience easier to learn. Virtual cases enabled the neuroscience to be both clinically applicable and relevant to healthcare staff from different disciplines. Further work is now underway to compare the utility of these eModules against more traditional forms of learning.

References:

Ref: 409, Friday 13th July, 10.00-10.20am, Barbour Room West
Globalisation of Paediatric Musculoskeletal Matters (PMM) Development of Paediatric Musculoskeletal Matters Nursing (PMM-Nursing) – a Free Online Evidence Based Education E-Resource for Nurses

N Smith, R Wyllie, C English, B Davies, S Jandial, T Rapley, H Foster
Newcastle University

Background:
Advances in the management of paediatric and adolescent rheumatology has resulted in the emergence of the highly specialist nursing role with dependence on local support from nurses in other health contexts to enable delivery of care. More children and young people (CYP) are as a result, supported by generalist nurses who may lack appropriate knowledge and experience. There is an important role for education and support of not only nurse specialists but also nursing colleagues involved in delivering care of CYP with musculoskeletal problems. We describe the development of an online resource Paediatric Musculoskeletal Matters Nursing (PMM-Nursing) – www.pmmonline.org/nurse - designed to provide educational materials from novice to expert to meet this need.

Methodology:
PMM-Nursing builds on the success of Paediatric Musculoskeletal Matters (PMM–www.pmmonline.org), an evidence-based and peer reviewed open e-resource for paediatric musculoskeletal medicine targeting non MSK-specialists [1-3]. PMM was launched in November 2014 with wide reach (196 countries with >88,900 users, >268,000 hits) and positive feedback from around the world. Whilst PMM targets medical students, primary care doctors, paediatricians and other clinicians involved in the care of CYP we aim to expand reach further to include nursing groups with the development of PMM-Nursing. Engagement with stakeholder groups (including school health, health visiting, paediatrics, research, adult rheumatology, community, specialist and student nurses) informed the essential ‘core’ MSK learning outcomes to derive content addressing the needs of nurses working in different roles to deliver care to CYP. Representatives from stakeholder groups, social science and web development experts transformed these learning outcomes into a suitable framework within PMM-Nursing.

Results:
The PMM-Nursing content is presented in six modules entitled: Normal Child; Arthritis and Conditions; Assessment; Management; Cases for Discussion; Resources. Within each module, sub-modules present the information in complementary ways (videos, images, Top Tips, cases, summary points and links to recommended websites, guidelines and key references). This information is structured to address the learning needs of nurses working in different roles. Content for the website was written by the project team with a structured content approval process and final ‘sign off’ by senior members of the clinical team. A process of external peer review is ongoing to assess the content, format and user experience.

Discussion:
Our collaborative and evidence based approach with engagement of end users and stakeholders aims to ensure that PMM-Nursing will address the MSK essential learning needs of nurses working in a variety of roles. PMM-Nursing is now live, and free and available to all on mobile, tablet or PC.

References:

Ref: 323, Friday 13th July, 10.20-10.40am, Barbour Room West
Faculty Development

Life beyond workshops: exploring the value of peer observation of teaching in General Practice
C Morris, A O’Brien
Institute of Health Sciences Education, QMUL

Background:
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 (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 the 160 GP teaching practices that support undergraduate medical education. We have been awarded the GMC/ASME Education Excellence Award (Continuum of Medical Education Category) to enable us to undertake this study.

Methodology:
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 experienced of GPs who act as observers and those they observe. We invited all GPs who had taken part in the preparatory activity for POT to take part in the study, whether or not they had yet engaged with the process.
The chosen method was semi-structured interviews using a topic guide. We planned a mix of individual and group interviews. Interviews are recorded and transcribed. The data analysis will take the form of a thematic analysis, a theoretical approach to data analysis that requires engagement with the literature prior to analysis of the data. This is part of an iterative process, where peoples’ experience is analysed in context.

Results:
We have conducted 7 individual interviews to date: data collection will be completed by the end of March. Preliminary analysis reveals a variety of motivations for engaging with POT. These range from the instrumental (‘must do’ to meet QA requirements) to the developmental (a welcome approach to thinking about and developing ones teaching practice). The analysis also reveals interesting differences in attitudes towards observation of practice in general, perhaps reflecting the learning histories of the GPs involved. The interviews are yielding interesting insights about the barriers to successful implementation, with suggestions for change being offered.

Discussion:
Our discussion will focus on lessons learned when seeking to implement POT in GP as a new form of faculty development. Tensions arise between the dual purposes of POT i.e. to assure the quality of teaching and to support the development of teachers. Preliminary findings suggest these tensions need to be reconciled if POT is to become a key approach to developing faculty in general practice.

References:

Ref: 178, Thursday 12th July, 2.00-2.20pm, Sage 1
Developing Palliative Care education and services in Kilimanjaro region, Tanzania
K Howorth, A Massawe, O Henke, F Serventi, EG Lewis, S Urasa.
Northumbria Healthcare NHS Foundation Trust

Background:
Healthcare professionals in Sub-Saharan Africa (SSA) frequently care for patients with malignancies, end-stage organ failure and AIDS (1). However Palliative Care (PC) is relatively new to Tanzania (2) and services are often variable and poorly integrated, which is the case across much of SSA (3).
One of the barriers to PC provision is the lack of trained healthcare professionals (HCPs) (2). A local qualitative research study (4) found that Tanzanian HCPs received limited training in PC provision despite being involved in caring for patients with life-limiting conditions. HCPs recognised their PC training needs, particularly in communication skills.

Methodology:
Design:
A one week training course was held in February 2017 in Moshi, Tanzania. It aimed to teach HCPs the basics of PC, particularly for those with no previous training but who care for patients with life-limiting illnesses. 22 people attended, 10 from the nearby tertiary hospital and 12 from hospitals or clinics across Kilimanjaro region. The HCPs included doctors, clinical officers, nurses, and pharmacists. The training content was based on the Tanzanian Ministry of Health PC guidelines. Topics covered including symptom control, breaking bad news, ethics, and government policy. Teaching was delivered through lectures, small group discussions and role play by experienced trainers from throughout Tanzania. The training was funded by the African Palliative Care Association True Colours Trust small grants scheme.

Evaluation:
This was through multiple methods. Participants completed a test before and after the course of 17 multiple-choice questions covering medication, ethics and general PC issues. Secondly, participants completed an evaluation questionnaire on finishing the course. This included likert scales rating aspects of the training, such as relevance to their work and meeting their expectations, and three free-text questions: which session had been the most useful and why, one thing they had learnt and what (if anything) they would do differently in their practice in the future. Participants were then contacted via email four months later and asked two similar free-text questions.

Results:
18 participants did a pre-course test and all 22 participants did the same test afterwards. More correct answers were given after the course, with an average score of 9.4 for the pre-test, and 12.9 for the post-test out of 17. Questions with the largest improvement were about nutrition at end of life and the meaning of the term “hospice”, with an increase of 38-39% of correct answers.
Feedback from the evaluation was positive; 100% of participants agreed or strongly agreed they would recommend the course to colleagues and all bar one agreed the training was relevant to their professional needs. Free text answers demonstrated a wide range of learning points on topics such as patients’ autonomy, assessing and managing pain, and resuscitation. On repeat evaluation, all participants were putting what they had learnt into practice, except one who had not been involved in PC yet but now felt more confident to do so. Participants reported improved communication with patients and their families, acting as advocates for patients and providing better pain control. Many had been sharing with colleagues about PC and one had subsequently arranged multidisciplinary reviews. Sessions about pain assessment and morphine were commonly highlighted in both evaluations as being the most useful session.

Discussion:
The training course proved highly effective in providing PC training to a range of HCPs who often had no previous training. Participants found it was useful and relevant to their work. This was demonstrated through their learning being put into practice at evaluation after four months.
We intend to extend the availability of this course to other HCPs in the region. This is a relatively low-cost intervention which could be adapted for use in training HCPs in other countries in SSA, where training in PC is often lacking.

References:


Ref: 025, Friday 13th July, 9.00-9.20am, Sage 2
International Medical Education

Ebyomugaso ebikolebwa okutaasa obulamu: Basic Life Support Training in Rural Uganda
H Bothwell, L Evans, K Jones
Swindon Academy, University of Bristol

Background:
Worldwide, a third of adult deaths are caused by cardiovascular disease, a high proportion occurring in the developing world (1). Contributing to these poor outcomes are suboptimal assessments, treatments and monitoring of the acutely unwell patient (2). Successful training in trauma and neonatal resuscitation is recognised in the developing world but there is little literature exploring adult resuscitation (3)(4). The first aim of this project was to explore attitudes towards adult resuscitation and establish what training had previously been undertaken by different clinicians based at Villa Maria Hospital in the Kalungu District of Central Uganda. The second aim of this project was to offer training in adult Basic Life Support (BLS) to staff and healthcare students based at Villa Maria Hospital and assess its outcome. This was a student-led project undertaken as part of a global health student selected component (SSC) offered by Swindon Academy, based at the Great Western Hospital, to medical students in their fourth year of the undergraduate medical programme.

Methodology:
Semi-structured interviews and focus groups were conducted with different clinicians in the hospital including healthcare students, nurses, clinical officers and doctors. These interviews were designed to focus on the participants’ current level of training and understanding of BLS. A practical training session was devised which focused on BLS (excluding the use of an automatic external defibrillator) which included pre- and post-training questionnaires assessing knowledge of resuscitation and confidence in performing resuscitation skills. Three training sessions were run for different cohorts: a pilot session for 5 Ugandan medical students, a second session for a group of 8 nursing and midwifery students and finally, a third to clinicians (which included clinical officers, medical students, physicians and nurses). Furthermore, the medical students and nursing students completed a clinical assessment where they were asked to demonstrate their resuscitation techniques. Voluntary feedback regarding the session was collected from participants. Data collected was analysed in excel and paired T-Tests performed between pre- and post-questionnaire knowledge and confidence score. Clinical skill assessments were analysed using descriptive statistics

Results:
27 participants were included in the analysis. 14 received ‘small group training’ whilst 13 received ‘large group training.’ 88% of all participants had received some form of resuscitation training. Of these, 46% had received theory training, 27% practical training and only 15% had received both. 12% had received no training at all. Nursing and midwifery students reported the highest proportion of theory only training. On written assessment all participants demonstrated a significant increase in knowledge and confidence. Using written multiple choice questions participants improved an average of 47% (p= 0.05) following the training session. Confidence was assessed by candidates self-reporting their confidence level on a 10 point Likert scale. On average this improved by 5.3 points following the training sessions and this was found to be significant (p=0.05). Analysis of qualitative data from clinician interviews in on-going but identified themes included rescue breaths being considered the most important aspect of resuscitation and doubts of a “good” outcome from resuscitation. The training was positively received by all participants with an average utility rating of 9.7/10.

Discussion:
The results of this small study reflect the need for regular formal training in BLS in low resource settings. The active engagement and positive opinions concerning the utility of the training are promising as well as the evidence of improvement in knowledge. More evidence is needed to explore the most practical way to implement regular training in resuscitation in low income countries in order to maximise good outcomes for patients.

References:

Ref: 113, Friday 13th July, 9.20-9.40am, Sage 2
How can we better prepare UK students for international electives, especially those going to resource-poor settings?
H Please, A Reed, A Blakes, B Wee
Bradford Teaching Hospitals NHS Foundation Trust

Background:
UK Medical Schools have a long-standing ethos of encouraging elective periods abroad, yet most research on the preparedness of medical students for elective study has focused on the United States and Canada. Such studies suggest medical students feel pre-departure training should be mandatory (Purkey & Hollaar, 2016), is rarely provided by Medical Schools (Imperato et al., 2016), and initiatives in this area are mainly student-led (Anderson et al., 2012). Four years ago, a group of Oxford University medical students reflected on their own elective experiences, primarily in low-resource settings. They concluded that despite strong university support for practical aspects regarding health and safety, they lacked the necessary ethical frameworks and practical skills to best contribute to, and learn from, the radically different healthcare settings they had visited. This anecdotal evidence was echoed by peers at other UK institutions, and thus inspired The Oxford Electives Conference.

Methodology:
A student committee designed and organised a full-day conference incorporating: inspiring lectures on global health; practical skills workshops relevant to resource-poor settings; a panel discussion on organisation and logistics; and a global-health poster competition. The inaugural Oxford Electives Conference was held in 2015 and attracted delegates from over 17 medical schools (including 2 internationally). Following this initial success, the conference has become an annual event, with plans for a fourth conference in 2018. The conference is largely funded through sponsorship. This subsidises equipment costs such as animal tissue and surgical skills simulation for specialised workshops. Delegates select 3 workshops from a diverse list: surgical skills, chest drain, lumbar puncture, fracture management, burns management, tropical medicine, developing world scenarios, and ethics. Delegates receive an ‘electives survival guide’ detailing learning from each workshop, and all profits from the conference are donated to the charity AMECA (£1600 to date).

Results:
Feedback was collected using an online questionnaire and quantitative data were obtained using a modified Likert Scale (1-5). Delegates responded very positively to this innovative educational intervention. In 2015 and 2016 the average overall conference enjoyment score was 4.49/5 (n=52) and 4.7/5 (n=55) respectively. This was reflected in both workshop and lecture components. In 2016 the average enjoyment ratings for each of the eight workshops was 4.42 or above. For all four lectures the average interest level was 4.45 or above (n=52).
Delegates also rated the conference highly valuable for elective preparation. The average score for the overall utility of the conference in 2015 and 2016 was 4.27/5 (n=52) and 4.57/5 (n=55) respectively. This was again reflected in multiple components: in 2016 the learning value for each workshop scored an average of 4.36/5 or above; and the lectures scored an average usefulness of 4.15/5 or above (n=52). In addition, multiple delegates emailed feedback requesting to host similar events at other UK and European universities.

Discussion:
Our findings suggest a need for better elective preparation training in the UK, specifically in regard to practical skills and ethical considerations. Arguably this responsibility may fall to Medical Schools, however the success of the Oxford Electives Conference demonstrates that student-initiatives can provide robust and inspiring educational preparation for elective periods abroad. Further work is required to assess the effectiveness of this format of educational intervention. First, through the elective student's behaviour; and ultimately, through measurable outcomes at host institutions abroad: stages three and four of the Kirkpatrick model, respectively. Our preliminary findings illustrate that an innovative student-led conference can better prepare UK medical students to make more of the amazing opportunities in international electives.

References:

Ref: 322, Friday 13th July, 9.40-10.00am, Sage 2
International short-term placements in health professions education – A Meta-narrative review
B Fruhstorfer, F Griffiths, D Davies
Warwick Medical School

Background:
Globalisation has changed the context, in which health care is delivered. In order to be prepared for professional practice in a globalized world, health profession students need to be equipped with a new set of knowledge, skills and attitudes (1). Experiential learning gained during an international placement has been considered as a powerful strategy facilitating the acquisition of global competencies (2). Although international experiences have been shown to have a number of educational benefits (3), various challenges, such as ethical concerns and health risks, may compromise the learning in such setting (4).

The aim of this review was to synthesize empirical studies examining the process and outcomes of international short-term placements in health professions education.

Methodology:
A systematic review was conducted using a meta-narrative approach. This method was developed by Greenhalgh et al (5) a decade ago. It draws on Kuhn’s notion of a scientific paradigm, which considers the development of sciences in paradigm shifts. Within a paradigm researchers look at the world through the same lens, which shapes problem of interest and research approaches.

Six electronic databases were searched for eligible studies in September 2016: Medline, Embase, CINAHL, PsychINFO, Education Research Complete and Web of Science. The search was further supplemented by backward and forward citation tracking. Iteratively the review was focused on international placements in socio-economically contrasting settings. Eligible studies were first considered within their research tradition before comparing and contrasting findings between research traditions.

The literature search is currently updated.

Results:
The electronic search yielded 93 papers with a further 28 papers identified by other search methods. Studies were grouped together into 10 meta-narratives taking into account professional discipline (medical, nursing and allied health professions) and approach. Findings were then considered in 4 dimensions: learner, educational intervention, institutional context and wider context.

Discussion:
Whereas earlier studies have focussed on the learner, more recent studies have paid more attention to the context of the international experience exploring the complex relations between stakeholder groups. More research is needed on how to enhance the educational process at micro-level and macro-level.

References:

Ref: 390, Friday 13th July, 10.00-10.20am, Sage 2
The Global Snowball - Exploring the increasing numbers of junior doctors and medical students intending to work abroad.

C Copplestone, J McCullough, P Lillie, P Davies, C Van Hamel
Gloucestershire Academy, University of Bristol

Background:
There has been an increase in the number of junior doctors leaving the UK to work abroad (1). This is set against a background of increasing demands on the NHS. A recent NHS workforce planning strategy (2) released by Public Health England notes a “huge growth in demand and focus on quality” in healthcare in recent years, due to a combination of the ageing population, increasing multi-morbidity, and a drive for safer staffing following the Mid Staffordshire Crisis. The same document reveals a total vacancy rate of 9.6% average across medical specialities. There is a well-documented increase in rota gaps across hospitals in the UK (3). As such the future intentions of incoming doctors will have significant implications for staff retention and workforce planning.

The aim of this study is to explore the motivations and intentions of medical students and newly-qualified doctors with respect to working outside the UK Health System.

Methodology:
This study is comprised of three phases. The first phase is a national survey, which has been sent to all 7,644 FY1 doctors who commenced clinical practice in August 2017. The second phase involves a survey of Bristol medical students that investigates career intentions, including the desire to work abroad. It will examine the prevalence of intention to work abroad in different medical school year groups. The final phase will use a focus group with final-year medical students to further explore the themes arising from the surveys, and to better understand motivations to work outside of the UK. Results of the focus group will be analysed using a thematic analysis.

Results:
There were 1,699 responses to the foundation doctor survey. The responses to this survey will be analysed using qualitative and quantitative approaches. Preliminary descriptive statistics analysing the national survey of new FY1 doctors show that the vast majority believe it is likely that they will work abroad at some point during their career. FY1 doctors predominantly view this as a temporary move. 72.1% of respondents identified that they were very likely or likely to work overseas for 1-2 years, but 23.7% reported that they intend to work overseas for the majority of their career. 13.5% of FY1s also consider it likely that they will leave medicine.

Results from the medical school student survey and the thematic analysis of focus group findings will be presented in full at the conference.

Discussion:
This study highlights the high proportion of junior doctors who intend to work abroad. It will explore how this intention develops in medical school by surveying the prevalence of intention to work abroad within different year groups, and a focus group with medical students in their final year. This will be used to add qualitative context to elucidate the motivations to work outside the UK Health system.

References:

Ref: 100, Friday 13th July, 10.20-10.40am, Sage 2
A New Starting Point; An evaluation of a Healthcare Assistantship Programme for first year medical students.

University Hospitals Bristol NHS Foundation Trust

Background:
There is growing evidence supporting the positive impact of Interprofessional Education (IPE) on the quality of patient care [1,2]. Despite this, IPE is still not being prioritised in undergraduate medical training. As part of an innovative Healthcare Assistantship Programme (HCA) at the University of Bristol, first year medical students will shadow a Nursing Assistant for five shifts across four months. The programme aims to improve understanding of, and positively influence students’ attitudes towards, the roles of other healthcare professionals, thereby improving future communication within the multipdisciplinary team. Although a sense of professional identity is often already established on entry to University, there is increased readiness for IPE at the beginning of training [3]. We hope to capitalise on this enthusiasm and positively influence the development of our students’ future professional identities, removing barriers to effective patient care [4].

Methodology:
251 first year students were asked to fill out an online questionnaire at the beginning of their induction in December 2017. The questionnaire focused on student attitudes towards other healthcare professionals as well as rating their confidence in taking on the role of a Nursing Assistant. Follow up questionnaire and results will be available in May 2018.

Results:
We received 175 responses (69.7%) to the initial survey. Students felt relatively confident about the prospect of working in the hospital environment (71% agreed), however felt less confident about practical skills e.g. taking observations and documentation (31% and 28% agreed respectively). When asked who they thought it would be most useful to shadow, they ranked junior doctors (89%) and consultants (81%) highly, stating it would be ‘really useful’ or ‘essential’. When asked about shadowing a member of Allied Health, Pharmacy or a Nursing Assistant, 6.2%, 6.2% and 3.9% respectively stated they were ‘unsure’ of their roles. Notably 75.4% said they would be interested in working as an HCA during their time at Medical School.

Discussion:
By providing this opportunity, we aim to increase students’ insight into the different professional healthcare roles, improving their future interprofessional relationships and, ultimately, improving quality of patient care. We hope to broaden our students’ experience of the clinical environment and encourage them to seek role models and learning opportunities from across a range of different professional healthcare roles, challenging the traditional silo mentality.

References:

Ref: 334, Thursday 12th July, 2.00-2.20pm, C2
An Interpreteive Phenomenological Analysis of Student Interprofessional Learning Experiences in an Aged Care Setting
A Teodorczuk, M Parker-Tomlin, G Symons, P C Chan, L Mitchell, N Reeves, G D Rogers
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Background:
With the ageing population, more challenging systems of care and greater patient complexity, increasingly it is recognised by clinical educators that healthcare professionals of the future will be required to demonstrate a higher level of collaborative care skills (1). Interprofessional education (IPE) is proposed as an approach that will help develop these collaborative skills as a consequence of learning from, with and about other professions (2). However IPE is not without its challenges, especially when undertaken outside of the classroom in clinical settings (3).
The purpose of our work was to explore, by means of Interpretive Phenomenological Analysis (4), how students made sense of an Aged Care interprofessional clinical exercise.

Methodology:
226 Griffith University Health students from five clinical backgrounds (dentistry, social work, medicine, nutrition and dietetics and pharmacy) were immersed in thirteen residential aged care settings in south east Queensland, Australia. Over the course of a half-day session students engaged with elderly residents in interprofessional teams around discipline-specific tasks (e.g. mental state exam for medics) and thereafter integrated their experiences through conferencing together with management, peers and facilitators. For the phenomenological interviews two nutrition and dietetics and four human services and social work students volunteered for individual interviews, while two group interviews were conducted, involving a total of eleven medical students. The findings were analysed by a double hermeneutic approach.

Results:
Experiences clustered into five themes, including a challenging of preconceived attitudes towards working with an aged population and in aged care settings; the activity forming a scaffold to achieve professional competency; perceptions of benefits for the aged residents and the students themselves; challenging of interprofessional practice stereotypes; and consolidation of learning as a result of the phenomenological interview experience.

Discussion:
This pragmatic IPE innovation appears to lead to deeper affective learning that arguably could help prepare students to develop collaborative skills with other professions and address preconceived negative ideas concerning working in aged care settings. Further, the aged care environment has suitably delivered a learning environment rich with patients and issues that students are most likely to encounter in future clinical practice.

References:

Ref: 150, Thursday 12th July, 2.20-2.40pm, C2
Can patient feedback about the safety of care support interprofessional education?
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Background:
Improving patient safety is a national imperative and interprofessional interventions are crucial in promoting safe patient care practices (1). Yet whilst interprofessional education (IPE) is compulsory in most healthcare professional curricula (2,3) patient safety remains a “tough nut to crack” (4) with progress seen as disappointingly slow. To address this, an existing patient safety intervention in use at four NHS Trusts (Patient Reporting and Action for a Safe Environment; PRASE) is being explored as the basis for an IPE intervention. The PRASE tools have been developed by researchers and are being used to systematically collect, and act on, information from patients about safe care in a hospital setting (5,6,7). In this study, healthcare students will use these PRASE measurement tools to request feedback from patients and then work collaboratively in multi-disciplinary pairs to generate ideas for ward-based quality improvement which will be shared with ward staff. Through undertaking this study we hope to explore the feasibility, sustainability and impact of having healthcare students involved in an established, ward-based, patient safety intervention and explore if and how this intervention can support curricula objectives relating to IPE.

Methodology:
Between November 2017 and May 2018 medical, physiotherapy, pharmacy and nursing students from programmes based in the Yorkshire and Humber region will participate in the study at one of fourteen wards across four local NHS Trusts. A selection of students (n=20) and ward staff involved in facilitating the study (n=8) will be interviewed to explore how using PRASE in a ward setting facilitates improved understanding of patient safety and quality improvement in healthcare students; how using PRASE facilitates improved understanding of working with other healthcare professionals in quality improvement; and, in what ways PRASE can result in changes to the service when healthcare students are involved. The data obtained from these interviews, as well as the student generated report, will be analysed using a process of framework analysis.

Results:
We will report on the main themes that arise from the framework analysis and present the benefits and limitations of the PRASE initiative identified by student learners and clinical staff. Commonalities and differences within and across professions and sites will be explored.

Discussion:
The main findings from the interviews will be discussed in relation to our aim of understanding the feasibility, sustainability and impact of delivering IPE in clinical settings. In addition, we will also outline some of the logistical challenges of piloting a ward-based IPE intervention across multiple NHS Trusts, multiple Higher Education Institutions and multiple health and social care programmes and discuss how we overcame these challenges.

References:

Ref: 299, Thursday 12th July, 2.40-3.00pm, C2
Designing and delivering training interventions for health and social care staff that lead to patient benefit
M Carter, J Illing, S Corbett, A Kehoe, H Hesselgreaves, C Rothwell, P Crampton, M Sawdon, M Swamy, G Finn
Newcastle University

Background:
Educational and training interventions for health and social care staff frequently aim to improve patient care, for example through improvements in medical knowledge, technical skills, patient and multi-disciplinary team communication skills, and infection control procedures. However, explaining how staff training reaches (or fails to reach) patients is a complex endeavour, with contextual factors and explanatory mechanisms operating at organisational, team and individual levels.

A realist review of evidence linking educational interventions for health and social care staff to patient outcomes was conducted to develop a programme theory to understand and explain these relationships, in order to inform the design and delivery of future interventions. This paper will present the practical implications of the theory and best practice in the design of educational interventions for patient benefit.

Methodology:
A systematic literature search across five databases (Embase, Social Services Abstracts, PsycINFO, CINAHL, Social Care Online) identified over 24,000 articles. Following filtering, over 1100 papers were reviewed and 465 were included in the review, including 50 key papers which were reviewed in detail.

Following a realist approach, a programme theory was developed in an iterative process to explain how learning is transferred to practice and leads to patient benefit (clinical effectiveness, patient experience, and patient safety). Important contextual factors, mechanisms and outcomes were identified, and the relationships between them were described.

Results:
A programme theory was developed to describe the transfer of training to achieve patient benefit. First, the organisation becomes aware of the need for change (e.g., through new evidence, policy or targets), plans the intervention, establishes support systems (e.g., resources, monitoring and evaluation systems), and engages key individuals (project initiators, senior leaders). Secondly, the attendance of individual learners is enabled (e.g., through mandatory participation) and they are motivated and ready to learn, recognising the relevance and benefits of the training (e.g., incentives, congruence with their role and learning needs). An effective intervention is then delivered by engaging learners and creating the desire to apply their learning. Following the intervention, the learner successfully transfers their learning into practice, overcoming barriers to transfer through systems and cultures that promote the maintenance and spread of learning. The theory also recognises the critical roles of effective and targeted evaluation, as well as considering patient characteristics.

Discussion:
The programme theory can be widely applied to staff educational and training interventions which aim to improve patient outcomes. Application of the theory in practice will be described. For example, during the initiation phase, monitoring and evaluation systems should be designed to target patient outcomes that are clearly relevant to the intervention. Appropriate staff with the ability and opportunity to implement learning should be selected for training. The intervention itself could use benchmarking and feedback, reflection and assessment to trigger learner recognition of the need to learn. The training should be delivered by credible instructors using a range of teaching methods, and should incorporate action planning for transfer. Transfer into practice can be supported by leadership behaviours, networking, incentives, whole-team involvement and being embedded in systemic change. These factors should encourage the transfer of learning into practice and fidelity to trained protocols, which should enhance the impact of training on relevant patient outcomes.

Ref: 414, Thursday 12th July, 3.00-3.20pm, C2
Evaluating the effectiveness of educational interventions for patient benefit: The development of reporting guidelines
H Hesselgreaves, S Corbett, M Carter, A Kehoe, J Illing
University of Newcastle

Background:
The UK Commission for Employment and Skills (UKCES)\(^1\) report that the health and social care spend £6.1bn on training in 2015. The effectiveness of this training is evaluated with many different methodological approaches and using outcome measures that are not always robust. The sheer diversity of training and educational interventions, ranging from informal learning to formal CPD activity and quality improvement, also creates a wide-ranging diversity in how outcomes are evidenced. Of the wealth of evidence reporting educational, attitudinal, behavioural, and service changes following education, only a fraction is able to evidence an effect on patients. During a realist synthesis of the evidence identifying how education and training of healthcare professionals can produce patient outcomes, we have produced a reporting guideline to share the lessons we have learned from high quality and poor quality evidence, and act as a resource to those aiming to demonstrate patient outcomes from their reporting of educational interventions.

Methodology:
The development of these guidelines was in several steps. The first involved our familiarisation with the current evidence of educational and training interventions which report patient outcomes. This was provided from 370 published papers which met the inclusion criteria for a realist synthesis. Inclusion was based on the reporting of an educational intervention aimed at healthcare professionals, that met Kirkpatricks Level 4(b)\(^2\) for evaluating the effectiveness of training. Achievement of Level 4(b) meant that the intervention was aimed at, and produced results for patients (clinical effectiveness, patient experience as reported by patients, and patient safety). The second step was to consult the current literature on good practice for reporting evaluations. These two processes produced a preliminary set of items. These were then subject to a Delphi method using an interdisciplinary panel of journal editors, academics, and healthcare professionals who report educational interventions.

Results:
Our analysis highlighted many areas of weakness in reporting the effectiveness of interventions. We chose 50 papers for their high-quality evidence, to examine in detail for how they provide explanations of the impact of education on patient outcomes. These were compared with the rest of the included papers to identify what lacks in the reporting, including those that intended to show a patient outcome, but the outcome was not produced. Among the areas identified for specific guidance are: a requirement to report how the need, or problem was identified that triggered the intervention; describe the organisational, team, and intervention context; describe the educational or training intervention in full, including delivery, duration and skills targeted); explain clearly how patient outcomes are defined and measured; clearly state the direction of effect (a patient improvement or a deterioration); clearly state controls in appropriate methodologies; discuss reflections of the implementation or research team about how the intervention produced the patient outcome.

Discussion:
The development of this reporting guideline has drawn on multiple sources and very in-depth knowledge of the evidence base. Each item of the guideline has been scrutinised by experts to create a resource that has high validity and has ease of utility, to improve the evidence base of the educational impacts on patients, as well improving the ability to appraise that evidence base.

References:

Ref: 376, Friday 13th July, 9.00-9.20am, C2
Paediatric Musculoskeletal (MSK) Triage in the Community – Rightpath – A Pilot Study
N Smith, J Firth, H Light, K Kinsey, N Snowden, J McNaught, V Mercer, T Rapley, A Nye, H Foster, S Jandial
Newcastle University

Background:
We have developed children and young people (CYP) community-based triage (called Rightpath) based on a validated adult MSK model developed by Pennine MSK Partnership Ltd (PMSKP), Oldham. Rightpath aims to identify CYP with MSK pathology and triage them to the appropriate service (rheumatology, orthopaedics, neurodisability or urgent care), managing those who do not need specialist referral appropriately within the community. Triage and referral guidance was developed in partnership with MSK specialists and primary care. The pilot tested safety, feasibility, acceptability, and transferability of triage in the community in two UK localities with particular emphasis on the educational requirements of the triage guidance for healthcare professionals who may not be expert in CYP MSK disease.

Methodology:
Piloted at two sites – PMSKP in primary care - with iteration of triage guidance and process followed by roll out at second site (South Tyneside NHS Trust – STGH – with triage of primary care referrals to general paediatrics). Using mixed methods, evaluation focused on: Implementation: focus groups with triagers and clinicians held at two time points to refine triage guidance and process. Training: for triagers based on their weekly log with regular case based discussions and targeted feedback. Evaluation: (i) Parent/patient questionnaire, incorporating the ‘Friends and Family’ test and ‘Collaborate’ completed immediately after consultation to explore expectations and satisfaction; (ii) Triager and clinician weekly log documenting experiences and training needs; (iii) Routine patient data including patient flow, referral data and times, eventual diagnosis; (iv) Service providers signposted to self-directed learning (paediatric musculoskeletal matters [PMM] - www.pmmonline.org) [1] and usage explored. This study had ethical approval and is NIHR CRN portfolio adopted.

Results:
Total triaged at site 1 - PMSKP over 6 months (101 Rightpath, 264 specialist paediatric services, 33 other). Most (46%) Rightpath case mix was deemed ‘normal variants’ and 97% were assessed by podiatry or physiotherapy within 4 weeks (39% within 2 weeks): of these 55% were discharged, 35% had a plan of management in the community and 11% referred on to secondary care for further assessment. Triage at site 2 – STGH - revealed from the 281 referrals to general paediatrics over 6 months, 90 (32%) had an MSK focus and of these 25 (28%) were deemed suitable for Rightpath.

Feedback from Rightpath family participants at both sites (N=121), was positive (no complaints or requests for onward specialist referral); 99% ‘would recommend the service’, with satisfaction scores high. Primary care physiotherapists and podiatry across both sites described the Rightpath clinical workload to be appropriate for their existing skills, with triage performed by staff with paediatric experience being important. Education and training for the triage team involved blended learning based on weekly logs of referrals, case based inter-professional discussion and PMM as a ‘go-to’ e-resource; feedback was very positive and used to iteratively amend the triage guidance.

Discussion:
We have shown the Rightpath model to be safe, feasible, acceptable and transferable; approximately 25% of referrals from primary care triaged to be assessed quickly and closer to home by an appropriate clinician with high satisfaction from families. The pilot process has iteratively informed the triage guidance and approaches to training that will be used to promote dissemination and wider implementation of the model.

References:
Inter-Professional Education

Pharmacy and Medical Student Inter-professional Learning in Primary Care
M Webb, C Blackshaw, S White, H Ratcliffe, N Ratcliffe, R McKinley
Keele University

Background:
Interprofessional education (IPE) is a well-established method of teaching where students learn from and with one another to improve collaborative practice and patient care (1). There is evidence to suggest that students want more practical rather than theoretical IPE and that authenticity and customization are important aspects for positive IPE experiences (2). Pharmacy students are reported to have better pharmacological/therapeutics knowledge than medical students but find the application of the knowledge more difficult to achieve (3). The aim of the project was to provide authentic clinical experience with pharmacy and medical students working together to provide safe and effective patient care, with inter-professional collaboration an increasingly important aspect of primary care. It was hoped that students would benefit from each other’s knowledge, skills and experience, and that they would establish strong team-working skills that would benefit them in their future clinical roles.

Methodology:
Two iterations of the project have been completed. Keele University medical students undertake a fifteen week GP assistantship in their final year. In 2016 nine well-established teaching GP practices were recruited to host twelve pharmacy students for four half days. The students were to perform joint consultations with patients, with the medical student leading the consultation and the pharmacy student contributing to medication reviews and therapeutic decision-making. In response to student feedback, in 2017 eight pharmacy students were placed in practice for six half days. Both groups of students received an induction outlining the aims and objectives of the project. On placement they undertook consultations together with patients who had been appropriately consented to participate. Three focus groups were performed in 2016 and a further three have been completed with the 2017 cohort exploring the experiences of the pharmacy and medical students. GP tutors were invited to participate in semi-structured interviews. Patients were provided with a feedback form exploring their experiences of the joint consultations at the end of each consultation.

Results:
A thematic analysis of the 2016 data shows that pharmacy students valued the clinical encounters and reflected on the challenges of communication with patients. The medical students reported benefits in terms of mentoring and teaching communications skills. There was some evidence of pharmacy students contributing to the management decisions and therefore improving patient outcomes (checking compliance before initiating further medication, inhaler technique). The pharmacy students were reported as lacking confidence by both medical students and tutors and this impacted on their contribution to the consultation process. 98% of patients report that they would be happy to see both students together in the future. The 2017 data are currently being analysed and the results will be available in the Spring.

Discussion:
The results so far indicate that the project was acceptable to students, tutors and patients. The pharmacy students gained from the clinical exposure and the medical students developed their mentoring and teaching skills. In response to feedback, the pharmacy students received more extensive training before attending placements in order to improve their confidence and clinical skills and the number of sessions was increased. The impact of these changes will be assessed once the data from this iteration are available. Further research is needed to explore whether this type of IPE alters the way doctors and pharmacists interact in the postgraduate arena.

References:
1. Thistlethwaite J Interprofessional education: a review of context, learning and the research agenda Medical Education 2012;46: 58-70

Ref: 344, Friday 13th July, 9.40-10.00am, C2
The eyes and ears of the ward: an evaluation of a Healthcare Assistant (HCA) shadowing programme from the perspective of the HCA

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Background:
There is worldwide recognition of the importance of interprofessional education (IPE) and the benefits that it brings to healthcare systems (1-4). Through the development of collaborative practice amongst healthcare workers, IPE has been linked to improved patient care and safety, mortality rates, staff turnover rates and conflict amongst healthcare workers (3).

Despite the vital role that Healthcare Assistants (HCAs) play in good patient care, IPE has tended to focus on the traditional healthcare professional roles of doctors and nurses. The new Healthcare Assistantship Programme at the University of Bristol in which first year medical students work alongside HCAs for five shifts, forms a key part of the IPE curriculum.

The Cavendish Review (2013) reported on low job satisfaction amongst HCAs and that they feel a lack of recognition for their role within the multidisciplinary team (MDT) (5). IPE aims to identify and minimise such barriers to good patient care. This project aims to explore the views of these frontline workers and to establish whether the Healthcare Assistantship Programme can influence the HCAs’ perceptions of their role and those of other healthcare professionals, and solidify their role within the multidisciplinary team (MDT) (4).

Methodology:
A pre-programme online questionnaire was distributed to HCAs. The questionnaire focused on the HCAs’ perceptions of their own role within the MDT and their confidence with teaching medical students. We also explored the HCAs’ experience of interactions with different healthcare professionals, as well as their pre-existing views on professional stereotypes. Results of the post-programme questionnaire, including qualitative data, will be collected and analysed in May 2018.

Results:
A pilot questionnaire was distributed to 16 HCAs with a response rate of 56.3% (n=9). 55.6% of the HCAs (n=5) reported seeing a medical student on their ward less than once a month and 88.9% (n=8) said that they spoke to a medical student less than once a month. 44.4% of HCAs (n=4) felt that medical students do not understand their role within the MDT and 22.2% (n=2) reported that they did not feel confident raising a patient concern with a medical student. The questionnaire revealed that the HCAs felt confident about taking on the role of a teacher; of particular note was their confidence in teaching communication skills. The HCAs were asked to choose three character traits that best described other healthcare professionals. The results suggested the presence of traditional stereotypes and professional silos. The HCAs described themselves as ‘hardworking’ and ‘caring’ whereas consultants and ward sisters were described as being ‘decisive’ and ‘good leaders’.

Discussion:
This project aims to establish the pre-existing views of the HCA and whether working closely with a medical student could alter these perceptions. In this way, we hope to gain insights into how the Healthcare Assistantship Programme could help to break down the perceived barriers between different healthcare professionals and ultimately to improve patient care.

References:

Ref: 396, Friday 13th July, 10.00-10.20am, C2
Empowerment and Opportunity in Primary Care: Enhancing the Real-time Patients’ Journey through Undergraduate Medical Education

H Finnamore, A Alao, H Alberti, D Kennedy, B Burford, S Hrisos, G Vance
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Background:
Patients presenting acutely to general practice (GP) with real-time illness provide valuable learning opportunities for medical students. These ‘real-time’ patients, who may not have had prior experience of medical student education, contrast with expert or volunteer patients who tend to plan contacts and have been previously briefed as to their role in the teaching exercise. As undergraduate curricula evolve to incorporate more teaching in primary care, educators will increasingly need to draw on these real-time patients, and hence GPs need to know how best to actively involve their patients. However, the educational role of this expansive group of patients, in contrast to those already engaged in education, has been little studied.1,2

As part of a study to understand real-time patient involvement in medical education, we conducted a workshop with patients, GPs and medical students to discuss ways in which to address barriers identified in our qualitative analysis.

Methodology:
A half-day workshop was held with students (n=8), GPs (n=17) and patients (n=14). This included small group discussions, co-facilitated by researchers and patients, which considered practical solutions to selected barriers: gaining consent for student involvement in the consultation; informing patients about the student’s role, and providing feedback to both students and patients. Discussions were summarised on flip charts and these summaries were analysed by framework analysis.

Results:
Analysis is on-going, but initial findings have identified patient empowerment and practice processes as key solutions to real-time patient involvement.
Patient empowerment was critical to involvement: patients felt they have much to offer students - both in enhancing the nature and quality of clinical information students receive, as well as providing feedback to the student about their performance. However, they felt that they needed ‘permission’ to educate. When patients understood better the educational processes around the student, and felt that their contribution was valued, they were more inclined to take the opportunity to participate.

Educationally naïve patients take a ‘journey’ through undergraduate medical education, and this journey could be eased by attention to practice processes. Patients need clear, relevant and visible information materials, but, crucially, also an ‘invitation’ to start the journey. While a good doctor-patient relationship most often led to this invitation, patient’ experiences could be variable, and ways to addressing the attitudes and approach of all practice staff, and students, could also help normalise real-time patient involvement in clinical encounters.

Discussion:
Real-time patients are invaluable to community-based teaching, but perhaps due to the hierarchical nature of medicine, need to feel empowered to educate students. The patient’s role may be supported by practical information materials, but we also need to encourage a practice culture where patient involvement is the rule, rather than exception. Further work to implement findings in this curriculum will be explored.

References:
1 Spencer J., Some activity but still not much action on patient and public engagement. Medical Education 2016; 50: 5-7
2 Spencer J. Patients in health professional education: so much known, yet much to understand. Medical Education; 2010; 44: 9-11

Ref: 320, Friday 13th July, 10.00-10.20am, C9
Use of a design thinking workshop including patients, students and educators to develop new ideas to increase the patient’s voice in the curriculum.

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Background:
As the doctor-patient relationship continues to evolve into more of a partnership, the role of patient involvement in medical education is growing too, with patients becoming more than just passive subjects to demonstrate symptoms, but active participants, and “partners in education”(1, p05-06). Novel approaches are needed to increase the patient’s voice in the curriculum, and it was hypothesized that patients themselves might be best placed to help with the generation of these new ideas. Design thinking is a useful approach to solving problems in education, and has been defined as “a creative process that helps you design meaningful solutions in the classroom” (2). The following study sought to investigate if design thinking could be used to assist patients and students in helping educators generate some new ideas in how to incorporate more of the patient perspective into the curriculum.

Methodology:
Six patients, three students and fifteen educators attended a three hour workshop at a local medical education conference, where they were divided into three groups, each containing a mix of participants. Each group was given a different problem to explore: “How might we support patients to give feedback to students?”, “How might we develop case based learning to include the patient’s voice?” and “How might we help students understand what it is like to be a patient?”. To assist with the generation of ideas, and focus discussions, the five stage model of design thinking was used: empathize, define, ideate, prototype and test. The aim was to generate one or two big ideas per group as possible solutions to the three problems posed.

Results:
Four main ideas were generated from the workshop: To support patients in giving feedback to students, it was suggested that students could be trained in facilitating feedback. Then after seeing patients on the wards in their clinical partner pairs, the student that had taken the history, or examined the patient could step out, whilst the remaining students stayed to collect honest feedback from the patient, which they could then pass on to their peer. To develop case based learning to include the patient’s voice, two ideas were generated: educators to write new cases with the help of patients that have been diagnosed with the condition in question, or patients, with the help of educators, to create more realistic role play scenarios for students based on their own experiences, for students to role play with each other, video tape, watch back and reflect and receive feedback on. In both ideas the patient could also record a video clip explaining what it is like to live with their condition, to increase the realism and relevance of the case. To help students understand what it is like to be a patient, it was suggested that students accompany patients whilst travelling to and from a hospital appointment, observing the appointment purely from the patient’s point of view, as well as experiencing first hand any transportation difficulties, or effects of delays in being seen.

Discussion:
Four novel ideas were generated by the workshop; for which the inclusion of patients and students, as well as educators was crucial. All six participating patients have agreed to help with the fifth stage of design thinking; “test”, and are attending further meetings to discuss how to pilot the ideas, and further funding has been obtained to assist with this. This also shows it is likely that our workshop had a positive effect on the patients themselves, as they were keen to have further involvement in the project. If successful the ultimate goal would be to incorporate these new ideas, that originated from design thinking, into the curriculum.

References:
A qualitative exploration of the lived experience of GP trainees failing to progress
R Winter
University of Leicester

Background:
Challenges in the current climate of the NHS facing general practice are multiple and extreme1-5. Amongst them is the increasing difficulty both recruiting and retaining GPs to practice2,6. GPs cite heavy workload, work-related stress, lack of time for family, and poor mental health and illness as factors influencing their decisions to leave practice or reduce clinical hours1,4,5. Literature suggests that these factors, amongst others, are rooted in GP training and trainees are having similar experiences7-12. There lacks, however, an in-depth understanding of the challenges trainees in difficulty face. This study aims to further understand the professional, personal and social factors that trainees perceive contribute to their failure to progress.

Methodology:
Forty-four GP trainees identified as failing to progress satisfactorily or failing to pass their membership exams were interviewed as part of a wider educational initiative to explore the factors they perceived contributed to their difficulties. Interviews were semi-structured and explored trainees’ perceptions of their training programme, working life, work-life balance, extracurricular and social activities, finances, motivation and stress. Thematic analysis was used to understand the unique experiences of each individual and find common themes amongst them. Interviews were audio recorded and transcribed.

Results:
Twenty-three interview transcripts met inclusion criteria. Emergent themes were presented using a framework consisting of three distinct categories: professional factors, personal factors, and social factors. Each category was defined for the purpose of the study and to aid the process of allocating themes and sub-themes. Each trainee’s experience was unique and individual but with common themes identified by many. In particular, difficulties with managing work-load, poor motivation for work and choice of career, lack of time for family and social activities, and poor mental health were significant.

Discussion:
This study adds support to the evidence that the challenges and difficulties facing GPs start to take root in training. When matched to the literature available on GPs in practice and the factors they identify as challenging there is much over-lap. Failure to fully understand the trainee’s journey and difficulties they have, and therefore to provide bespoke packages of care and remediation that fully address their needs, is likely to add to the retention crisis if trainees in difficulty do manage to gain their certificate of completion of training. References:

Ref: 133, Wednesday 11th July, 3.20-3.40pm, Barbour Room East
An evaluation of the long-term impact of the Tomorrow’s Teachers course on harmonisation of education into the working environment.
F Speyer, R Lusznat, R Mann
Health Education England (Wessex)

Background:
The Tomorrow’s Teachers course has been running in Wessex since 2001, and in 2012 was franchised to the East of England Deanery. The course is designed and delivered by doctors in training to doctors in training and aims to enhance existing and develop new skills in providing effective teaching to an undergraduate and postgraduate medical audience, providing near-peer experiential training based on lived experiences. Whilst feedback is obtained immediately after the course, to date there has been no evaluation of the longer-term impact of the course on changes in behaviours or results (as defined by Kirkpatrick’s model of course evaluation (1)).

Methodology:
Delegates between 2011-2016 were sent a qualitative questionnaire asking for reflections upon their experiences of the course, how the course has changed their educational practice, and whether the course has influenced their ongoing career involvement in medical education. Participants were invited to undertake face-to-face interviews to explore responses in more depth.

Qualitative data from questionnaires and interviews were evaluated using thematic analysis to generate codes. The constructivist paradigm has been chosen as a basis for this research due to its ontological ideology that there are multiple realities shaped by individual experiences, its epistemological basis that the researcher is immersed within the research situation and therefore inseparable from the research, and its methodological goals through qualitative analysis to understand how and why events occur and how individuals make sense of them.

Results:
27 questionnaire responses. 7 in-depth qualitative interviews. Some key themes are highlighted as follows.
Awareness of learning and teaching styles:
Through reflecting on their own learning styles delegates developed an appreciation of how others might learn, and how they might need to adapt teaching to facilitate learning. One delegate commented that the course “helped me to help other people help me to learn”.

Reinforcing learning:
Even when delegates had undertaken similar teaching courses previously, the context in which they work had changed when they came on the course, and therefore they were able to build upon their previous experiences and formulate new ideas in education.

Creating networks:
The course has signposted delegates towards other educational initiatives and opportunities. It has been the springboard into a regional or national community of educators e.g. Wessex Medical Education Fellowship scheme, or to higher degree educational qualifications.

Faculty:
4 of the 7 interviewees had returned to become faculty. This was viewed positively for being enjoyable, learning new skills in facilitation and communication, and for learning from delegates e.g. “Being part of faculty keeps reinvigorating learning. Each course the faculty learns something new from delegates”, “Because we enjoy [being faculty] ... it’s nice to see the enthusiasm of the people who come on the course”.

Discussion:
Many examples exist of how this course has influenced and improved trainees as teachers and inspired them to become educationalists of the future. Additionally, this research has uncovered that a course whose original ethos was to improve teaching has in fact provided its delegates with a breadth of skills that is far reaching outside the medical education environment. Awareness of individuals’ own learning styles has heightened, and the way they seek out their own education changed, leadership skills have developed, education networks fostering, inspirational ideas shared, and personal interactions between colleagues improved. Perhaps most striking is the direct impact on patient care through improved communication with patients, negotiating challenging conversations, and involving patients in their own health literacy through education.

The limits of this retrospective study are acknowledged and future prospective work is planned to explore the themes generated from this work.

References:

Ref: 252, Wednesday 11th July, 3.40-4.00pm, Barbour Room East
Career motivations and intentions in foundation doctors: national foundation programme career survey 2017
P Lillie, C Copplestone, J McCullough, C Van Hamel
University Hospitals Bristol

Background:
A recent NHS workforce planning strategy (1) released by Public Health England notes a “huge growth in demand and focus on quality” in healthcare in recent years, due to a combination of the ageing population, increasing multimorbidity, and a drive for safer staffing following the Mid Staffordshire Crisis. The same document reveals a total vacancy rate of 9.6% average across medical specialities. There is a well-documented increase in rota gaps across hospitals in the UK (2). As such the future intentions of incoming doctors will have significant implications for staff retention, workforce planning and the continuing education of the junior workforce.

Methodology:
This study explores the motivations and future intentions of newly qualified doctors with respect to a career in the medical profession. It presents the results of a national survey sent to all FY1 doctors in their first week of clinical practice. Data from 1,699 completed surveys, a response rate of 22%, will be analysed using qualitative and quantitative approaches.

Results:
Preliminary descriptive statistic show that the vast majority of new F1 doctors believe it is likely that they will work abroad during their career. FY1 doctors predominantly view this as a temporary move. 72.1% of respondents identified that they were very likely or likely to work overseas for 1-2 years, but 23.7% reported that they intend to work overseas for the majority of their career. 13.5% of FY1s also consider it likely that they will leave medicine. The study suggests that the most frequent motivations for a career in medicine are a fulfilling and varied career (93.0% of respondents) and security of employment (85.8%).

The final results of the study will include further analyses of data to examine how motivations and career intentions differ with ethnicity, gender and age. Notable preliminary results include the observation that male respondents reported being more likely to leave medicine (p=0.03) and the youngest FY1s (aged 21-25) were most likely to work abroad for 1-2 years. In terms of respondents’ ethnic background, there were significant differences in intention to work abroad (p=0.01), and perception of job security (p=0.01), satisfactory income (p=0.01) and career fulfilment (p=0.01).

Discussion:
These data provide evidence of the need for further research into career motivations as well as the need for NHS workforce planning to account for the proportion of newly qualified doctors who intend to work outside the UK Health system, in order to maintain a safe, sustainable and ‘up-to-date’ work force.

References:

Ref: 277, Wednesday 11th July, 4.00-4.20pm, Barbour Room East
Contributing factors which facilitate or hinder progression in Specialty training:
C Rothwell, J Illing, J McLachlan, S Forrest, N Kumar
Newcastle University

Background:
Specialty/registrar training is a stressful period in medical training. Trainees must work in a busy clinical environment and meet their training competencies. In the UK trainees must complete an Annual Review of Competence Progression (ARCP), to ensure that they are competent to pass to the next level of training. This research was interested in why some trainees (5%) have difficulties progressing through their training. An in-depth understanding of the factors and how they interact with each other, and impact on trainees underperforming is needed to help with early identification of difficulties and better support trainees having difficulty progressing. Therefore the aim of this research was to identify those factors that either facilitate or hinder medical specialty trainees in their training, with a specific focus on trainees who had received adverse ARCP outcomes i.e. targeted or extended training time.

Methodology:
A constructivist grounded theory approach[1] was used to identify a model focused on identifying those at risk and how best to support them. Semi structured interviews were conducted with trainers and specialty trainees in one region of the UK and who had received a targeted or extended training outcome in their annual appraisal.

Results:
Semi structured interviews were conducted with trainers (n=57) and trainees (n=21). Three main factors were identified which could act as barriers and affect the progression of specialty trainees, if unsupported. 1) Individual factors such as; personality, graduating from overseas and working patterns e.g. working part time. 2) Training environment factors such as: the training system itself, academic performance indicators, lack of and context of feedback, issues being caught early on and negative behaviours. 3) System factors such as; changes in society and changes in the training structure. In addition, enablers have been identified to help support trainees make a successful transition through their training for each of these three areas.

Discussion:
Data from this research has informed the development of a ‘theoretical circuit’ model that highlights who is at risk of having difficulties progressing in training if unsupported and also identified the barriers and facilitators to trainee progression. The circuit model highlights risk factors for trainees within the three areas which emerged from the data (individual, training environment, and society) and illustrates the different forces that come into play to influence ARCP outcomes.
In conclusion this research has identified why trainees have difficulties progressing in their training. It identifies the barriers and facilitators to progression and has developed a model to identify who may be at risk if support is not put in place, and what support could be put in place to help mitigate or help with early identification of issues arising.

References:
Charmaz, K. 2009. Constructing grounded theory: a practical guide through qualitative analysis, Los Angeles; London, SAGE

Ref: 284, Wednesday 11th July, 4.20-4.40pm, Barbour Room East
Crafting reflection: implementation of patchwork text assessment in medical education.
A Noble, E Fowler
University of Bristol

Background:
TLHP is a medical education course at Bristol University. As with many such courses we have predominantly written assignments where students are required to demonstrate reflecting learning and critical engagement with literature. Mindful that our students are required to join an unfamiliar discourse (in education) we have moved to an innovative formative assessment strategy using patchwork texts, as proposed by the HEA and educational literature. These short pieces of writing are generated by students before and during Certificate units encouraging reflective writing and self & peer assessment. Furthermore, they are mapped to the Professional Standards Framework of the HEA, thereby demonstrating achievement through the course of the HEA fellowship.

Methodology:
The evaluation of this initiative is ongoing. All 69 students entering the Certificate in 2017/18 have written at least two patchworks, with a further 31 writing 2 patchworks for their second unit. Ongoing analysis is looking at the development of a depth of reflective analysis as measured against Koole et al’s operational indicators of the reflection process, which is now embedded in our marking criteria. Furthermore, student and teacher evaluations of the scheme will be collected at the end of the academic year and thematically analysed to show impact on teaching and learning.

Results:
Early analysis of the patches show students reflecting on their own learning and teaching, and in particular identifying areas that they want to improve. One patchwork asks for a definition of learning on their own learning and teaching, and in particular identifying areas that they want to improve. One patchwork asks for a definition of learning and teaching, and in particular identifying areas that they want to improve. One patchwork asks for a definition of learning and teaching, and in particular identifying areas that they want to improve. One patchwork asks for a definition of learning and teaching, and in particular identifying areas that they want to improve. One patchwork asks for a definition of learning and teaching, and in particular identifying areas that they want to improve. One patchwork asks for a definition of learning and teaching, and in particular identifying areas that they want to improve.

Discussion:
Students are already demonstrating progression in reflective writing. The final unit of the Certificate will also incorporate peer assessment and feedback into the process. We expect the use of patchwork texts as a formative assessment strategy to strengthen our students’ confident use of educational discourse and to find their own ‘educational voice’ more quickly and confidently than in previous years.

References:

Ref: 330, Wednesday 11th July, 4.40-5.00pm, Barbour Room East
Exploring the Experience of Undertaking an Educational Integrated Training Post in General Practice.
S Cope, H Alberti
University of Newcastle upon Tyne

**Background:**
There are problems with GP recruitment and retention. It is thought that innovative or integrated training posts (ITPs) may offer a new and appealing way of training, which may address this problem.
The Northumbria GP training scheme has been running integrated training posts for over ten years, more recently they have expanded to incorporate educational and integrated educational and teaching posts. Trainees undertaking these posts split their time between general practice, and a hospital specialty and or education and research.
These posts were noted in the recent Health Education England report “By Choice Not by Chance”(1) as an example of good practice of raising the profile of General Practice to students and future doctors.
There is little in the literature with regard to educational integrated training posts, in particular with regard to the trainees’ perspectives on these posts.
This study takes a phenomenological approach to explore trainees’ experiences of undertaking an educational ITP.

**Methodology:**
This is an interpretative phenomenological project addressing the following research questions:
• Why do trainees decide to undertake an ITP?
• What has been the impact of that decision on personal and professional development?
• What are the strengths and weaknesses of an educational ITP?
Methods used were focus groups and one to one interviews aiming to gain an understanding of trainees’ experience of undertaking an educational ITP. A maximal variation of viewpoints was sought; following analysis of focus groups candidates were invited to one to one interviews, themes identified were explored in more detail. Interviews and focus groups were audio recorded, transcribed and underwent thematic analysis.

**Results:**
Participants included trainees who are currently or have previously undertaken an educational ITP. 11 trainees were interviewed in focus groups and a further 4 in one to one interviews.
Thematic analysis was undertaken using a model described my Braun and Clarke (2). Initial codes were applied to the data, and then codes combined to form overarching themes.
Four themes and eight subthemes were produced from the data. These captured participants’ views of their experience of undertaking the posts, as well as the factors influencing their decisions to undertake the posts.
Trainees undertook educational ITPs to pursue an interest in teaching, and to enhance job prospects in both within GP and education.
The overarching theme identified from the data was identity formation. Subthemes within this include professional identity, personal identity and identity associated with the community.

**Discussion:**
Integrated training posts offer an alternative model of GP training, and academic and education opportunities for trainees.
Educational integrated training posts are positively viewed by trainees, reporting positive and sustained impacts on personal and professional development. Multiple factors were found to contribute to identity formation as reflected in the literature (3,4). This study draws upon social learning theory (5) and literature on professional identity formation (3,4) to help understand themes identified and add to the transferability of the findings.
Based on these findings we would recommend continuation of these posts in the Northern region and implementation of similar posts nationally. Further work is needed to assess any impact on GP recruitment and retention.

**References:**

Ref: 089, Wednesday 11th July, 5.00-5.20pm, Barbour Room East
Exploring the F3 generation; thematic analysis of the qualitative interview study

C Rizan, J Montgomery, C Ramage, J Welch, G Dewhurst
Brighton and Sussex University Hospitals NHS Trust

Background:
The number of F2 doctors directly entering UK specialty training has steadily declined over recent years; from 83% in 2010(1), to 50.4% in 2016.(2) The year following F2, outside UK training, is informally termed an ‘F3’ year, and there is a growing generation of doctors taking one, or more (F4 etc.) There is a paucity of qualitative research exploring this. The primary objective of this research study is to explore the reasons why F2 doctors are choosing to take a year out of training. The secondary objective is to explore the experiences of that year and the impact on future career choices.

Methodology:
This is a cross sectional qualitative research study using an explorative narrative bounded case study design.(3) The sampling frame was one foundation school and participants were selected from respondents using purposive sampling. There were a total of 15 participants, who commenced their F3 year in 2015, 2016, or 2016 (5 of each). Participants were interviewed either face to face or via skype. Use of a narrative inquiry approach enabled participants to control interview content and to recount experiences naturally. Interviews were audio-recorded and professionally transcribed. Thematic analysis was conducted using process tracing and cross-case analysis. This enables the examination and testing of themes similarities and differences across the different groups. Process tracing was further applied for theory-testing, to test alternative explanatory hypotheses and the sequencing of events. This study has ethical approval (ER/BSMS697/1).

Results:
Participants were 50:50 male to female with an average age of 28. All were UK trained, representing 8 medical schools. Common themes arising from the data included the lived experience of the decision to leave. Within this there was a spectrum of exhaustion, ranging from need for a break from training/ the NHS through to burnout. Some doctors recalled stressful aspects of their foundation training, including feeling unsupported and undervalued. Others had more positive experiences and reasons for taking F3 years centred on career decisions and F3 opportunities. There was a sense of loss of control during foundation years, compounded by the imposition of a new UK junior doctor contract(5) rejected by 58% of junior doctors. Some doctors felt a loss of control over their physical location, autonomy and work-life balance. This commonly involved issues surrounding rotas and annual leave. Meanwhile, taking an F3 year enabled these doctors to win back control and step off a perceived ‘conveyor belt’. Participants asserted that many friends and peers were taking F3s.

Participant F3 year experiences ranged from completing higher degrees and anatomy demonstrating through to specialty specific fixed contract fellowships (either abroad or in the UK). All but one intend to return to specialty training in the UK and all planned to take further time out in the future. Some participants were warned against the risk of taking an F3 year by senior colleagues and family members. Advantages in taking an F3 year included allowing doctors to decide which specialty to apply for and to reflect on their experiences to date. It also allowed doctors to prepare for specialty applications, including doing relevant courses, exams, research and interview preparation. For those who had returned to training, participants described feeling happier, refreshed and with valuable experience. Participants also reported a lack of barriers in returning to training after taking an F3 year and were welcomed back with positivity.

Discussion:
Junior doctors moving from the foundation years (a compulsory element of their training), into the next stage of training of their choice can be described as passing over the threshold and into a liminal space of transition.(5) This study has highlighted the reasons that doctors have taken to enter this unknown space and helps us understand these factors.

References:
Exploring the Impact of Maternity Leave on Doctors in Specialty Training
J McGoran, M Corrigan
Queen's University Belfast

Background:
Maternity leave represents a significant period in the life of a doctor in training. The growth in the proportion of women entering the medical profession has meant that it is an issue that has increasing importance and implications for workforce planning.(1) In response to the potential challenges facing the training of doctors who take maternity leave, the professional community has sought to offer support and guidance. The experiences of doctors and other professionals who embark upon maternity leave are mixed due to the many obstacles that can arise.(2) This study aims to assess the impact of maternity leave on specialty training for doctors and make suggestions for how their experience can be improved.

Methodology:
In determining the lived experiences of doctors in training who undergo maternity leave, interpretative phenomenological analysis (IPA) represented an ideal way in which to analyse the data that was collected.(3) Through its idiographic focus, the perspectives of the participants were central to this research. The information given by the participants was condensed and used to form themes, both converging and diverging in nature. Through snowball sampling, five participants were selected to take part in one on one, audio recorded interviews which were then transcribed. Ethical approval was received for the entirety of the research process.

Results:
The overarching theme emerging from the participants’ accounts was that of the maternity period as an important transition point that carries implications for professional training in the long term. The main themes extracted from the data covered the support and information received from others, professional development and training progression and the challenges and changes to the doctor’s identity. Quotes from the participants highlighted these themes in their lived experiences and analysis through IPA was conducted.

Discussion:
The experiences of doctors in training reflect much of the information available in the existing literature. The difference between the ideal scenario for trainee experiences and reality was in many ways great however the analysis of the comments allowed for conclusions which fed the recommendations for improvement. These measures focus on the support, both practical and through attitude change that the workforce and training community can offer at an individual and an organisational level.

References:
1. GENERAL MEDICAL COUNCIL 2013. Good medical practice.
2. THE ACADEMY OF MEDICAL ROYAL COLLEGES 2016. Maternity/Paternity Survey Results.
How to support refugee doctors into practice: helping to overcome an economic and humanitarian crisis
A Kehoe, J Metcalf, N Kumar, B Araia, K Wilkinson-Bell, M Hinman
Newcastle University

Background:
Recruitment to medical posts remains an issue throughout the UK. Yet the skills of many refugee doctors are going to waste. Instead of these individuals being in enforced unemployment, we could be supporting them to work. The Refugee Programme for Overseas Doctors (REPOD) was developed to help resolve some of the issues caused by staff shortages in the North East of England, whilst also supporting a humanitarian cause (i.e. intended to have both economical and humanitarian successes). Employing refugee doctors was not viewed as a long-term solution, but instead REPOD intended to utilise their skills whilst they are here.

The development and implementation of the project involved the collaboration of Health Education England North East (HEENE), the North Tees and Hartlepool NHS Foundation Trust (NTHFT) and Investing in People and Culture (IPC); a registered charity operating across North East. REPOD had three phases of support:
1. Supporting doctors to develop English language skills and pass the International English Language Testing System (IELTS), provide a clinical mentor, provide volunteering opportunities and give access to teaching and training.
2. Supporting doctors to prepare for the Professional and Linguistic Assessments Board (PLAB), including structured clinical attachments, simulation and tailored training together with ongoing clinical mentoring.
3. Supporting doctors to secure jobs: local opportunities, training, networking and links with other Trusts.

The evaluation aimed to explore and evaluate the processes and successes of REPOD, informing current practice through evidence-based recommendations.

Methodology:
A mixed methods case study design was adopted from December 2016-2017. The process evaluation was a continuation of a realist evaluation of the Programme for Overseas Doctors (POD) project, which also took place at NTHFT. This enabled testing and refining of proposed theories, whilst also developing new theory specific to refugee doctors.

Questionnaires and interviews with the refugee doctors and trainers were completed during the first four months of implementation and were followed up at 9 months. Those deemed as ‘experts’ regarding REPOD have also been interviewed. Framework analysis took place.

Results:
There has been a great deal of impact from the project to date. Acceptability and support during the pilot stages of REPOD remains extremely high (local Trusts, regional and national bodies, the public). Media coverage has also been extensive. This media coverage has resulted in 11 refugee healthcare workers contacting IPC and NTHFT to participate, as well as multiple contacts from other areas. Some of these individuals have moved from elsewhere in the country just to take part in REPOD.

Currently three of the 12 participants (11 doctors and one pharmacist) taking part in REPOD have passed the IELTS, and two have completed the first part of the PLAB. One individual has passed PLAB 2 and has gained employment at North Tees hospital as a foundation doctor. Many are awaiting results for their IELTs or are due to take the exam very soon. They are also expected to be in clinical placement very soon. Cost effectiveness is predicted to be high.

The findings illustrate key organisational, training and individual factors that need to be considered when implementing schemes like REPOD. The learning curve of this pilot has been steep, and as a result, REPOD has been developed accordingly. The need for ongoing tailored support, including dedicated and skilled administrative support, is highlighted.

Discussion:
Given that it can take up to 3.5 years for a recent overseas graduate to pass the required exams and up to 7 years for mature overseas clinicians with a practicing gap to pass the required exams, the REPOD results to date are inspiring for future outcomes.
There is much enthusiasm for the second cohort of REPOD, taking forward the lessons learnt from this evaluation of the pilot. Monitoring will continue over the next year.

Ref: 415, Thursday 12th July, 2.20-2.40pm, Barbour Room East
Job satisfaction in newly qualified doctors. What makes a great first junior doctor job?

J Petrie, R Brown
Imperial College Healthcare NHS Trust

Background:
Retention is a significant issue within the NHS, with only 34% of second year (Foundation Year 2) doctors planning on going directly into speciality training in the UK in 2016 [1]. Rimmer recently described the influence that work environment can have on morale and job satisfaction for doctors, with involvement and engagement being particularly important [2]. The first year of junior doctor training is a stressful time. The "GMC: Be Prepared" report describes “a widespread sense of a leap into a new world of responsibility, emergencies and seriously ill patients, complex cases and comorbidity, pressures and priorities, NHS systems and expectations, hierarchies, established practices and accepted standards of care, and routine activity” [3]. One in ten UK medical graduates does not feel prepared for the transition [3].
We sought to understand more about junior doctor perceptions of transitioning into their hospital jobs and specifically what influences their job satisfaction within these jobs.

Methodology:
We collected quantitative and qualitative data from first year junior doctors (Foundation Year (FY) 1) around their experience of their first year jobs at a large central London teaching hospital trust. Newly qualified UK doctors complete three 4-month jobs over their first year of training and quantitative data was drawn from surveys completed after each of these. A link was sent via trust e-mail to the survey, and e-mail and face to face reminders resulted in completion rates between 30 and 50% for each iteration of the survey.
Qualitative data was in the form of two focus groups, each with ten to fifteen first year doctors (FY1s) lasting 40-50 minutes towards the end of their first year of practice. The qualitative data was analysed by thematic analysis. The data was transcribed, coded and themes were drawn from the coding.

Results:
Our qualitative data highlighted five overarching themes as to what influences the quality and satisfaction of junior doctor posts. These were:

1. Educational Opportunities; good posts have frequent educational opportunities including on-the-job teaching, exposure to sick patients, practical procedures and opportunities to attend clinic, with less heavy administrative duties.

2. Autonomy; good posts have opportunities to work independently (such as independent ward rounds and clerking patients independently) and opportunities to make clinical decisions.

3. Relationships; in good posts junior doctors develop good relationships with the team and the team have good relationships with each other, their seniors are supportive, there is a no-blame culture, consultants know the names of their juniors, and they have the opportunity to develop relationships through working with the same few consultants for a few days or weeks at a time.

4. Structure and Organisation; good posts have rota s that enable doctors to take their leave easily, there is an appropriate ratio of junior doctors to patients and they finish work close to their scheduled time.

5. Delivery of Care; in good posts junior doctors feel the patients receive high quality care, there are few cancellations of surgery and seniors communicate well with patients.

From our quantitative data, the first year (FY1) doctors would recommend 80% of their jobs to colleagues (77 out of 96). We invited free text comments around job satisfaction and Educational Opportunities were mentioned for five jobs, Relationships were mentioned for one job, Structure and Organisation was mentioned for four jobs and Delivery of Care for one job.

Discussion:

• Newly qualified first year (FY1) doctors were mostly satisfied with their jobs within our hospital trust; they would recommend 80% of their jobs to colleagues.
• Influences on their job satisfaction related to Educational Opportunities, Autonomy, Relationships, Structure and Organisation and Delivery of care.

References:
1 Rimmer A. More F2 doctors are choosing a career break. BMJ 2017; 359 doi: https://doi.org/10.1136/bmj.j5121
Path to Success: An interactive and innovative way of promoting laboratory medicine to potential applicants
A Wort, M Clarke, J O'Brien, A Robb
Health Education England North East

Background:
Laboratory medicine careers are varied and dynamic. There has been a decrease in applications to laboratory medicine training and gaps in training programmes with serious consequences for the future of laboratory medicine and patient safety. Our objective was to increase the number of applications to laboratory medicine.

Methodology:
We designed and ran an event in 2016 and 2017 that promoted laboratory medicine to medical students, foundation doctors and core/speciality trainee doctors. A one day event was co-organised by Health Education England North East (HEENE), Royal College of Pathologists and Association of Clinical Pathologists. In the morning, there was a ‘pathology battle’: an interactive laboratory simulation where attendees visited different specialty laboratory simulations where they requested, conducted and interpreted investigations. In the afternoon, there were workshops on preparing an application, interview skills and an expert panel. Trainees had a high level of involvement in both planning and delivery of the event.

Results:
Feedback- respondents: 2016 = 31, 2017 = 33, recommend the event; 2016 = 100%, 2017 = 97%. Strengths of the event (free text comments): having representatives of different laboratory specialties (2016 = 4, 2017 = 12), ‘pathology battle’ (2016 = 16, 2017 = 9), enthusiastic/approachable/engaging/informative faculty (2016 = 10, 2017 =8), opportunity to talk to trainees (2016 = 5, 2017 = 5), workshops (2016 = 9, 2017 = 5). In 2016, 80.6% were considering a career in pathology. In 2017, attendees were asked how likely they were to choose a career in pathology before and after the event. The proportion who said they were ‘very likely’ to choose a career in pathology more than doubled, from 41% to 84%. In 2017, we asked ‘Where did you find out about the event?’ Free text comment: ‘An ST1 trainee in (anonymised) recommended who had attended last year’(sic), ‘I had attended last years’ event so knew it would happen again this year’, ‘Came last year’.

Discussion:
The feedback from both the 2016 and 2017 event was excellent, with everyone in 2016 and everyone, except one, in 2017 saying they would recommend the event. The interactive ‘pathology battle’ received many positive comments at both events. Attendees found it useful to meet and question current trainees from the different specialties, and commented positively on how enthusiastic, approachable, engaging and informative the faculty were. In the 2017 feedback there was evidence that the event in 2016 had been successful in that one attendee had come on the recommendation of someone who attended the year before and had gone into pathology training and two people chose to attend again.
The HEE recruitment data shows the competition rates nationally for haematology, combined infection training and immunology went up, whilst for histopathology they went down. Overall fill rates for HEENE laboratory medicine posts went down. Small numbers make this data difficult to interpret. It is unknown if these numbers would have been even lower without our event. The 2017/2018 recruitment round is in progress so the impact of the 2017 event is unknown at present.
We identified a gap for a national event to promote laboratory medicine careers, which has been well received. Further work is needed to assess its impact on recruitment.

References:
1. https://specialtytraining.hee.nhs.uk/Competition-Ratios

Ref: 169, Thursday 12th July, 3.00-3.20pm, Barbour Room East
Perceived Organizational Support and Career Intentions: The Stories Shared by Early Career Doctors.
G Scanlan, J Cleland, P Johnston, K Walker
The Univeristy of Aberdeen

Background:
Early medical careers decision making is a complex process involving weighing up job-related and personal factors (1,2). It is critical to understand this process given many early-career doctors are choosing to leave clinical medicine or work in contexts other than those in which they were trained. Emerging evidence indicates that the experience of working in a supportive culture during early postgraduate years of medical training is a highly influential factor in terms of training preferences in early career doctors. Additionally, residents/trainees place a lot of value on positive working environments and professional development when considering where they want to work. However, we do not understand what supportive culture and positive working environments actually mean to early career doctors and how perceived support may influence their career intentions. Therefore, our aim was to explore residents’ (trainees) experiences of support in the workplace, and how this impacted on their career intentions. We targeted a group of doctors at a critical point in early medical careers decision making – the time when they are expected to apply for specialty training.

Methodology:
This was a qualitative study using semi-structured interviews incorporating a narrative inquiry approach for data collection. The interview questions were drawn from the literature and informed by data from two focus groups. Interviews were carried out in two UK locations (which differed in terms of locality and participant demographics), then transcribed for analysis. Initial data coding and analysis of the transcribed interviews was inductive, using thematic analysis to generate a non-interpretative coding scheme which was used to code all data and elicit themes and narratives.
On scrutinising these initial themes and stories, we were struck that many of the issues related to the relationships our participants had with the organization they worked for, and the people they worked with. We then used the social theory of Perceived Organizational Support (POS) (3) as a theoretical framework underpinning secondary, deductive data interpretation, to aid conceptual generalizability.

Results:
Twenty-one interviews were carried out in total: thirteen from one region, eight from the other. Eleven interviewees had applied for specialty training, while ten had not. We examined the narrative data through the POS lens to identify common themes across the collected stories, as well as to illustrate the unique aspects of each story. Support from senior staff and colleagues influenced participants’ job satisfaction and engagement. Positive relationships with senior staff and colleagues also seemed to act as buffer which helped our participants cope with challenging situations. Feeling valued (in terms of acknowledgement of efforts, and respect) was very important to participants. On the other hand, perceiving a poor level of support from the organisation and its representatives (supervisors, colleagues) had a detrimental impact on participants’ intentions to stay and work within the NHS.

Discussion:
Overall, this is the first study to explore directly how the experiences in postgraduate training can have a critical impact on the career intentions of trainee/resident doctors. We found perceived support in the early stages of postgraduate training was a pivotal factor in whether or not doctors applied for specialty training, and/or intended to stay working in the NHS. These findings can be used to inform workforce policy and planning nationally, and have transferable messages to other contexts which are struggling to recruit and retain junior doctors.

References:

Ref: 056, Friday 13th July, 9.00-9.20am, Barbour Room East
Performance enhancing routines for optimisation using metacognition (PERFORM) study: improving junior doctors’ management of acutely unwell patients using sport psychology
H R Church, D Murdoch-Eaton, J Sandars
The University of Sheffield

Background:
Despite management of the acutely unwell patient being a key competency of the 2009 Tomorrow’s Doctors outcomes (1), newly qualified doctors frequently report under-preparedness in this domain (2). A recent review highlighted that junior doctors’ management of the acutely unwell patient is not solely influenced by insufficient knowledge-base, but also by the complex clinical environment, (3) with challenging situations compounding difficulties with information synthesis and decision-making (3, 4). These findings support previous reports that negative emotions such as stress and anxiety can overwhelm junior doctors and adversely affect patient management (4, 5).

In other industries which similarly demand optimal performance during challenging and stressful situations, such as sport, psychological techniques (Performance Enhancing Routines, PERs) have been used to minimise the negative impact of emotions and behaviours during performance (6). In Medicine, similar strategies have been trialled in surgery where mental imagery has been found to enhance surgical performance and decrease stress (7). However, in both sport and surgery, the use of PER training interventions have been mainly prescriptive and failed to appreciate the importance of when and how to apply PERs for optimum performance enhancement for an individual (7, 8).

This PhD project is the first to our knowledge to investigate whether the coaching of an individualised self-regulatory model (PERFORM) (9) to select and adapt PERs can enhance emotional and behavioural control for junior doctors in order to achieve a measurable improvement in their management of acutely unwell patients.

Methodology:
The overall design was a series of case studies of 12 first and second year foundation doctors in a district general and tertiary teaching hospital in the UK.
The project was organised into three phases: exploratory, pilot and final dual–arm intervention lasting 3 months.
Data was collected using mixed methods including semi-structured interviews, think aloud commentaries, direct observation of simulated clinical scenarios and feedback questionnaires. Data was analysed within and across cases.

Results:
The exploratory phase of PERFORM confirmed that junior doctors are aware that the negative emotions and/or behaviours experienced when managing acutely unwell patients can affect their management and recognised an absence of strategies with which to minimise this. The pilot phase demonstrated study participants were able to incorporate at least one PER within a clinical simulation immediately following coaching of the PERFORM model, and additionally their resulting self-efficacy for controlling negative emotions/behaviours was maintained or improved. Feedback of the coaching specifically highlighted that participants found the model easy to understand and use, as well as being enthusiastic about applying it to their clinical practice.

Results from the final interventional phase of the study will also be presented and mapped to Kirkpatrick’s hierarchy (10), including whether there were resulting changes to clinical practice.

Discussion:
This study supports previous findings that challenging environments can produce decreased focus, lack of clarity of thought processes and difficulties in knowledge-recall during management of acutely unwell patients. Furthermore, junior doctors most importantly appear to lack effective strategies to manage these inherent emotional and behavioural aspects of care provision (11).
This study evidences positive outcomes of an individualised, self-regulatory model for coaching junior doctors to apply PER to optimise their performance in management of acutely unwell patients. The authors offer suggestions for potential for future work in up to three domains: 1. Wider roll-out of the programme amongst newly qualified doctors. 2. Inter-disciplinary adaptation, including nurses or paramedics. 3. Inter-industrial feedback of the PERFORM model into other environments, including sport.

References:

Ref: 066, Friday 13th July, 9.20-9.40am, Barbour Room East
Preparedness for postgraduate dental practice: strengths and challenges in practice
G Vance, R Holmes, M Smith, J Ashman
Newcastle University

Background:
The transition to clinical practice has been studied in many healthcare professions, with ongoing concerns about graduates’ ‘preparedness’ for different elements of practice [1]. Dental graduates face additional challenges to those in medicine in that they may legally work as independent practitioners in general dental practice from ‘day one’. However, limited work has examined how this transition is experienced in practice, and what ‘preparedness’ means in this context [2].

Methodology:
A validated questionnaire [3] was distributed across North East England and North Cumbria. This captured ratings of preparedness for a number of elements of practice from trainees (Foundation Dentists (FDs), General Professional Training Trainees (GPTTs)), their Educational Supervisors (ESs), final year dental students and their undergraduate Clinical Teachers (CTs). A total of 8 focus groups were conducted with FDs (x3, n=36), GPTTs (x2, n=15), ESs (x2, n=18) and CTs (x1, n=3).

Results:
72 trainees (95% response rate), 58 educational supervisors (75%), 67 final year students (74%) and 31 clinical teachers (26%) completed the questionnaire.

All respondent groups rated preparedness high on most items, with none indicating low preparedness. However, trainees and students rated themselves as more prepared than their respective educator groups.

Qualitative analysis identified that perceptions of preparedness were relative to the reference group to which individuals compared themselves, were volatile, and anticipatory of the move to the next training stage.

Challenges of transition included exposure to ‘complex’ presentations, which could be the concurrence of individually simple activities, rather than activities presenting discreet ‘difficulties’.

Most challenging was the transition to working within the NHS, including aspects of charging and issues around ethical judgements in treatment planning when patients may not be able to afford optimal treatment.

Factors shaping the experience of transition were: the nature of the workplace; their undergraduate experience and how this enabled learning and the relationship with, and approach of their supervisor.

Educational Supervisors described roles that related to educational support, clinical advice, and providing developmental support and reassurance. However, there was variability in how much direct involvement supervisors felt they should have. Some felt their role was to support the adjustment into the workplace, while others felt they had a more direct teaching role.

Discussion:
Findings resonate with medical education literature, with scarce undergraduate experience of workplace practice [4], and necessary adjustment to aspects of work not addressed by the skills and knowledge base gained as students [5].

It appears that ‘preparedness’ is better seen as a ‘process’, changing during a period of transition, rather than a state which a graduate enters and passes through. Students do not become more prepared to the point of transition, rather a degree of unpreparedness is a feature of that transition. This process is complex, uncertain, and contingent on successful adaptation to a sometimes unfamiliar, and often unpredictable, workplace environment.

Educational interventions that acknowledge this complexity, seek to address unfamiliarity, and balance the expectations of graduates and supervisors may be most likely to successfully ease the associated challenges.

References:
Teaching by Core Medical Trainees: A qualitative study exploring the challenges of delivering teaching as a Core Medical Trainee

W Hunt, M Tombs, J MacDonald.
South Warwickshire NHS Foundation Trust

Background:
This qualitative study aimed to explore the challenges of delivering teaching by Core Medical Trainees (CMTs). This project was initiated, since teaching by these doctors had been largely neglected by the literature, despite the fact that CMTs are in the unique juncture between general medical training and higher specialist physician training.

Methodology:
Using the literature, two research questions were developed to explore this topic, namely are CMTs prepared to teach, and secondly what factors impact on the teaching delivered by CMTs? The project received ethical approval from Cardiff University and local authorisation to proceed was gained. The methodology used a constructivist standpoint; as part of a wider project, an initial online questionnaire to a convenience sample of 240 CMTs in the West Midlands region was developed to further investigate these questions (1,2).

Results:
The response rate was 16.25% (39/240). The questionnaire gave rise to discrete and free-text responses, of which the latter were analysed using inductive content analysis in a method described by Elo and Kyngäis (2008) (3). Comments were thematically coded and grouped according to frequency.

Describing the respondents, of the 39 doctors, 16/39 (41.0%) were in the CMT1 year, 22/39 (56.4%) were CMT2, and 1/39 (2.2%) was taking a CMT3 year. 15/39 (38.5%) were male and 24/39 (61.5%) were female. 91.7% (33/36) of CMTs most commonly taught by bedside teaching. On an incremented scale of 0 to >10 hours per week spent teaching, most CMTs rated that they spent 1 hour teaching on average per week (14/39, 35.9%), this was followed by no teaching (12/39, 30.8%), 25.6% (10/39) estimated they spent 2 hours, and 7.7% (3/39) spent 3 hours.

When CMTs selected from a range of options regarding the challenges that affected their teaching, the most commonly selected option was ‘service provision’ (91.2%, 31/34), this was closely followed by ‘time’ (85.3%, 29/34). CMTs taught most often during the working day (68.6%, 24/35), this was followed by during the day in their own time (17.1%, 6/35).

Inductive content analysis was performed on six open questions with free text responses. Each response theme was ordered according to frequency. On the question: how do clinical commitments on the ward affect the teaching that you deliver? The most frequent answers were ‘time constraints’ (18/34), ‘heavy workload’ (15/34), and ‘staffing problems’ (7/34). With the question: what do you think are the main challenges of the teaching that you deliver? The most frequent answers were ‘time constraints’ (17/30), ‘clinical commitments’ (9/30), and ‘preparation and planning’ (6/30). When asked: how well prepared do you feel to teach? The most common answers were ‘in general: well / very well prepared’ (11/29), and ‘in general: averagely prepared’ (9/29).

When asked regarding CMT commitments such as MRCP, QIP, and the portfolio and if these commitments had an impact on teaching by CMTs, the most common answers were: ‘negative impact’ (18/29), followed by ‘no impact’ (6/29). The penultimate open question asked CMTs to rank teaching compared to other commitments. The most frequent answers were; ‘low / least priority’ (14/29), with ‘unclear priority’ being the second most frequent (7/29).

The last question asked what further topics could be explored regarding the challenges of teaching by CMTs. The answers to this question were quite heterogeneous, but many suggested potential solutions to improve teaching such as: ‘time tabling CMT teaching into job-plan’ (6/21), ‘training in teaching as part of CMT’ (4/21), and ‘making teaching a CMT requirement’ (2/21).

Discussion:
This study’s results provide original insights into the challenges of teaching by CMTs. The themes generated from this study will be helpful to all those involved in postgraduate medical education. In particular, it provides insight into the challenges of teaching by CMTs and will enable us to support and encourage CMTs in this important role.

References:
The relationship between socio-demographic factors and selection into UK postgraduate medical training programmes: a national cohort study
B Kumwenda, J Cleland, G Prescott, K Walker, P Johnston
University of Aberdeen

Background:
Knowledge about the allocation of doctors into postgraduate training programmes is essential in terms of workforce planning, transparency and equity issues. In the last 30 years, the UK medical student body has become increasingly diverse in terms of gender, ethnicity and age, but not in terms of socio-economic background (an individual’s or family’s economic and social position in relation to others, based on income, education and occupation).[1] While getting a medical school place is the first hurdle in medical education and training, those who successfully complete medical school then face many other selection challenges for postgraduate education and training. However, to the best of our knowledge, there has been no research looking at the relationships between individual characteristics and allocation into the first stage of postgraduate medical education in the UK, the Foundation Training. To address this gap in the literature, the current study examines the relationships between applicants’ socio-demographic characteristics and outcomes on the UK Foundation Training selection process.

Methodology:
This is a longitudinal, cohort study of trainees who applied for the first stage of UK postgraduate medical training in 2013-14. We used the UK Medical Education Database (UKMED) to access linked data from different sources, including medical school admissions, assessments, and postgraduate training. UKMED also contains contextual data relating to socio-economic status. Allocation to foundation training (offers) is based on an algorithm of the Foundation Training application score. The foundation training application scores were not normally distributed, so we used Kruskal-Wallis, and where necessary, Mann-Whitney U tests to compare the scores across independent groups. Multivariable ordinal regression analyses were used to predict the odds of applicants being allocated to their preferred Foundation schools.

Results:
Applicants allocated to their first choice Foundation School scored on average a quarter of a standard deviation above the average of all applicants in the sample. After adjusting for Foundation Training application score, no statistically significant effects were observed for gender, socio-economic status (as determined by income support) or whether applicants entered medical school as graduates, or not. Ethnicity and place of medical qualification were strong predictors of allocation to preferred Foundation school. Applicants who graduated from medical schools in Wales, Scotland and Northern Ireland were 1.79 times, 4.32 times and 7.62 times (respectively) the odds of applicants who graduated from a medical school in England to be allocated to a Foundation school of their first choice.

Discussion:
There is a clear relationship between an individual’s performance on Foundation School selection process (their application score), and whether or not they are allocated to their first choice of Foundation School. The Foundation School selection process does not appear to discriminate against applicants from lower socio-economic groups. However, after controlling for the effect of the application score, those from ethnic minorities appear to be disadvantaged. This finding may be linked with the geographical preferences because certain Foundation schools in London area and the south of England are very competitive than the rest of the UK. Yet a higher proportion of the UK medical student population from BME backgrounds live in London and the South-East of England. Many medical students wish to do their Foundation Programme in a familiar region or have the opportunity to access training in the capital.[2]

The data provide supportive evidence for the fairness of the allocation process but highlight some interesting findings relating to “push-pull” factors in medical careers decision making. These findings should be considered when designing postgraduate training policy.

References:
1. Improving the Measurement of Socioeconomic Status for the National Assessment of Educational Progress: A THEORETICAL FOUNDATION. 2012. (Available at https://nces.ed.gov/nationsreportcard/pdf/researchcenter/Socioeconomic_Factors.pdf.)

Ref: 028, Friday 13th July, 10.20-10.40am, Barbour Room West
Top Tips for Masters Student’s Success: Sharing experiences to shape the future.
L Delgaty, J Matthan
Newcastle University

Background:
At Newcastle University, the Advanced Study Module (ASM) of the Masters of Medical Education (MMEd) programme is a 60-credit research stage with little formal teaching. Like dissertations on many masters’ programmes, students design and deliver a small-scale research project. Although the jump to autonomous research can be difficult [1], upon completion, students should be competent in conducting basic research, the evidence of which is typically provided in their dissertation. There is a growing demand in Higher Education (HE) for students to have knowledge of research principles and the skills for independent research [2]. However, students often struggle with this and view ‘research’ as a frightening and mysterious activity, something that only occurs within the realm of serious academic pursuit [3]. For students, the conceptualisation of the explicit ‘product’ is not difficult. There is a clear, physical outcome: the dissertation. The difficulty lies in the less transparent ‘process’, which is hidden and secret [1]. The complexity can be difficult for students to understand, and for supervisors to articulate - and has been called a ‘concealed journey’ [4]. Each student begins the journey with a naïve interest in a topic and constructs knowledge about the research process itself, over time [6]. This tacit knowledge lies below the surface and is traditionally accumulated only through experience [7]. On completion of the dissertation, this knowledge is invariably lost and inaccessible to others. Consequently, there is an increasing awareness in HE that students require help and scaffolding to develop these unseen research skills [8]. One way of doing this is for past students to share research experiences and learning points; new discoveries can be made and the research process, instead of being concealed and hidden, can be exposed to others [1]. This is particularly relevant for medics, as sharing experiences provides a context for engagement and promotes retention [11].

Methodology:
The MMEd programme averages 10 ASM students per year. In September 2017, an email was sent to the last five cohorts (n=47). They were asked to share ‘top tips’ from their experiences on the programme. Twenty-two students responded. A total of 67 tips were received, some of which were limited to a few sentences, while others were paragraphs of narrative. There were both positive tips: students suggesting what worked for them, and negative: mistakes students made with warnings on avoidance. The tips were collated and coded. Using content and qualitative content analysis, these were organised into descriptive themes, and compared numerically.

Results:
Qualitatively, three main themes emerged: (1) practicalities (timetable, reading, writing up, attending class, visiting the library, etc.), (2) the process itself (what to do at different stages, how to prepare, how to navigate systems, how to ‘manage’ one’s supervisor, how to get help, what to do after the process has been completed, etc.) and (3) higher-order reactions (ambition, accepting help, fear, pride, etc.). Numerically, these themes corresponded to 55%:30%:15%.

Discussion:
Past experiences are clearly a valuable resource to other students. Once students graduate and move on, however, discussion and shared experiences are lost. ‘Tips’ may have superficial or shallow connotations for some, but this was clearly not the case. As well as practical and process-based advice, students overtly warned their peers about the dangers of pride and the necessity of ambition. All three themes, with specific textual examples, have been collated for circulation to students. Current students will contribute to tips for subsequent cohorts. It is clear these research experiences that usually remain unexplored, hidden and secret are invaluable [1]. The challenge for academics is how to capture and ‘teach’ this practical intelligence only acquired throughout the research experience itself [9].

References:

Ref: 161, Thursday 12th July, 2.00-2.20pm, Barbour Room West
Trainees’ perspective for Core Surgical Training Bootcamps
J Pascoe, O Beaumont, B Rybinski, A Humphreys, T Walker
Musgrove Park Hospital (Taunton)

Background:
The Core Surgical Training (CST) bootcamps have been running successfully in the Severn deanery for three consecutive years. Their feedback and results have been reported both regionally and nationally. However, specific trainee perspectives on the bootcamp have not been reported.

Methodology:
24 trainees were attended the 2017 CST bootcamp induction programme. A survey was sent out three months after the bootcamp to gather information on trainees’ perspective using the online application Surveymonkey. Trainees were questioned on the impact of the bootcamp on their CST anxieties, knowledge of professional support services, professional network development and overall motivation.

Results:
Anxieties
19 trainees completed the survey (83%). 100% of trainees shared at least one anxiety about commencing CST. Common anxieties included: exams, increased responsibility and increased expectation of surgical skill. 63% (19) of trainees stated the bootcamp helped relieve these anxieties. 17% (4) of trainees raised practical anxieties such as moving areas or working in a bigger hospital. 32% (6) of trainees were either unsure if the bootcamp helped alleviate such anxieties or felt that it did not help. It may be the case that within this group, the process helped the learners identify previously unknown concerns.

47% (9) of trainees felt the bootcamp did not alleviate anxieties regarding ST3 application. Indeed one commented that the focus on ST3 so early made “the whole process appear more daunting”.

Pastoral support
Following the bootcamp 68% (13) of trainees were aware of how they would obtain professional support (both clinical and pastoral) if required.

Networking
Prior to starting core training this event provided a useful venue for networking. 74% (14) of learners feeling they had adequate time to get to know their training program director.

47% (9) of trainees are believed to have used the contacts and content of the bootcamp to begin future projects. This includes the development of specific audits, attending recommended courses and meeting peers. The ability to establish digital networks such as those possible with “whatsapp” or email was praised. 100% of participants approved of the social event organised with it being commended as a bonding experience and a relaxed environment to meet previous core trainees.

Motivation
Only 5% of participants had exposure to a similar process during undergraduate years with many 87% (20) who had no experience prior believe it would have been a beneficial influence.

100% of participants felt as though the process motivated them for further training, an ideal response at the initiation of core training.

Discussion:
The bootcamps have been shown to provide a robust induction to the CST programme and are regionally well received by learners and providers. This study has identified successful outcomes of the bootcamp not explicitly outlined in the course learning objectives and a number of areas for potential change to improve the process for further years to come. Such as addressing a broader range of common anxieties amongst new core trainees, possibly re-directing focus from ST3 interviews and developing an undergraduate model of the surgical boot camp.

References:

Ref: 238, Thursday 12th July, 2.20-2.40pm, Barbour Room West
What evidence is being collected about how doctors learn professionally from social media and what does this imply for medical learning?

T Bird, A Fox
University of Leicester Medical School

Background:
A 2017 literature review examined the landscape of recent publications (2007-2016) about how both teachers and doctors learn through social media to identify whether learning was being considered and, if so, how evidence was collected. The driver for the review was the perception that, due to ethical concerns, society is increasingly pressuring professionals in ways likely to close down, rather than open up, their exploration of global communication through social media for learning. The review questioned whether academic research is moving at all counter culture, offering an evidence base which can support doctors to evaluate their social media use to maximize its value for professional learning. (1) This paper seeks to bring from this review pertinent questions and recommendations regarding social media’s role in medical learning.

Methodology:
The review questions were the following:
1. What nature of studies (between 2007 and 2016) are being carried out into the social media use of teachers and doctors?
2. Whose learning is being considered and how is it being studied?
3. What evidence is being collected about how teachers and doctors learn professionally from social media?

A holistic search strategy was chosen and a dataset formed, and a thematic approach to analysis was chosen to generate the findings. Selected papers covered studies located in a total of ten different countries with UK and USA dominant.

Results:
54 articles related to doctors’ learning in social media were selected. Empirical studies were dominant (N=33, 61%). Some referred to social media (N=17, 32%) others to Web 2.0 (N=9, 16%). Specific tools of focus were Facebook (N=11, 20%) and Twitter (N=7, 13%). 39% (N=27) covered the learning of in-service medical practitioners in various disciplines. Medical students’ learning featured in 20% (N=11) of the articles, with some reference to doctor learning in articles principally focused on other topics such as patient-doctor relationships (a further N=3 or 6%) or patient attitudes.

A notable publication type was the position piece: articles presenting arguments without reference to a full empirical study and including a number of letters and editorials (N=11), offering advice for healthcare professionals, acknowledging the challenges of social media and conceding the need for training as it is inevitable that professional should engage with these media. Some papers analysed social media posts qualitatively; the next most prevalent method was interview often as part of small-scale multiple-method case studies, and findings here included the value of learning and sharing through social media at medical conferences (2).

Discussion:
The analysis of articles identified five study foci: use and attitude to social media, evaluations of the use of social media in courses, professional online behaviour, conference communication, and evaluations of information shared by social media. There appeared to be a schism between those papers focusing on the challenges of social media for ethical reasons, and those highlighting the potential of social media in learning, for example learning at medical conferences. A salient consideration is whether medical students, particularly perhaps at postgraduate level, are exposed at all to positive views and models of social media for learning. An issue arising is the importance of good research into technology-enhanced medical learning such as that focused on by the ASME TEL group, and the need for publication of such research.

References:

Ref: 394, Thursday 12th July, 3.00-3.20pm, Barbour Room West
Postgraduate Education

What Factors Are Critical to Attracting NHS Foundation Doctors into Speciality or Core Training: A Discrete Choice Experiment
G Scanlan, J Cleland, P Johnston, K Walker, N Krucien, D Skåtun
The University of Aberdeen

Background:
Accurately predicting medical workforce supply is increasing challenging. Doctors no longer behave in time-recognised ways in terms of career decision making, and their behaviour no longer fits with service need. The research indicates multiple personal and work-related factors influence medical trainee careers decision making (1,2). However, the relative value of these diverse factors is under-researched, yet this intelligence is crucially important for informing medical workforce planning, and retention and recruitment policies. Our aim was to investigate the relative value of UK Foundation doctors’ preferences for different training post characteristics during the time period when they either apply for speciality or core training, or take time out.

Methodology:
We developed a discrete choice experiment (DCE) specifically for this population. To ensure best practice for the DCE, multiple approaches were undertaken to identify the characteristics, some of these included: interviewing foundation doctors and attending deanery teaching sessions. The DCE was distributed to all second year Foundation Programme doctors (F2s) across Scotland as part of the National Career Destination Survey in June 2016. The DCE was used to establish the key attributes that influence the career decision making of F2 doctors. The main outcome measure was the monetary value of training-post characteristics, based on willingness to forgo additional potential income and willingness to accept extra income for a change in each job characteristic calculated from regression coefficients.

Results:
677 out of a possible 798 F2 doctors provided usable DCE responses. Location was the most influential characteristic of a training position, followed closely by supportive culture and then working conditions. F2 doctors would need to be compensated by an additional 45.75% above potential earnings to move from a post in a desirable location to one in an undesirable location. Doctors who applied for a training post placed less value on supportive culture and excellent working conditions than those who did not apply. F2 males valued Location and a supportive culture less than female F2s.

Discussion:
This is the first study focusing on the career decision making of UK doctors at a critical careers decision-making point. Both location and specific job-related attributes are highly valued by F2 doctors when deciding their future. This intelligence can inform workforce policy to focus their efforts in terms of making training posts attractive to this group of doctors to enhance recruitment and retention. Overall, establishing what trainees value (3) most could help to establish the best training methods and the optimal working and learning environments for the global workforce.

References:

Ref: 055, Thursday 12th July, 2.40-3.00pm, Barbour Room West
A cross-professional study of interprofessional learning, support and feedback - in first-year junior doctor trainees and newly-qualified teachers.

H Foster-Collins
University of Exeter

Background:
This research study uses narrative data collection methods to explore workplace experiences of interprofessional support, as described by first-year junior doctor trainees and newly-qualified teachers. Early career professionals face many challenges as they learn to apply judgement in complex, dynamic situations within busy and pressurised environments. In both medicine and teaching, there are concerns regarding mental ill-health and early departure from the professions, with difficult transitions between formal training and independent practice, and significant social consequences arising when teacher or doctor performance is impaired. It has been noted that professionals often seek support from others in the workplace, in the form of information, advice and feedback, which may assist their workplace learning and development. However, these experiences take place within informal workplace contexts and may be affected by social factors, such as professional hierarchies, local workplace cultures and relationships, as well as organisational constraints.

Methodology:
Recent narrative data, exploring first-year junior doctor experiences of transitions to medical practice(1,2,3) and consisting of both semi-structured interviews and audio diaries, is currently being re-visited in a secondary Framework analysis(4) to explore: which other professionals provide support in the workplace, what types of support they provide, and which social and organisational factors are described by participants as facilitating or inhibiting this support.

This cross-professional study, carried out within the Centre for Research in Professional Learning at the University of Exeter, will then compare and contrast the findings of this analysis with primary narrative data collected from newly-qualified teachers regarding their experiences of workplace support.

Results:
This presentation will discuss: why it is useful to compare the workplace experiences of different early professionals, how narrative methods can be used to explore these, and the affordances and constraints of differing narrative data collection methods, as well as sharing some findings from the secondary analysis of junior doctor narrative data.

Discussion:
Given parallels between the working environments of teachers and doctors, an investigation of early-career interprofessional support in both professions could point towards those practices which work well or impact negatively upon learning, providing a greater understanding of the transitions between professional training and practice.

References:
A Foundation for Training: What Makes a Good Clinical Placement?

D K Adu-Sarkodie, R Parikh
Pennine Acute NHS Hospitals Trust

Background:
Doctors in training need high quality clinical placements that meet their educational needs in a safe (and supported) clinical environment.(1) Exploring trainees’ experience is a vital part of quality assurance.(2) Additionally, educational and clinical supervisors (as part of the appraisal process and revalidation process) should reflect on clinical placements they provide to maximise educational benefit.
The Pennine Acute NHS Trust Foundation Programme provides a diverse range of placements offered at 4 hospital sites and multiple general practices in Greater Manchester. Educators felt coding qualitative feedback from Foundation trainees could generate themes that could be shared across all clinical placements. Trainees’ views were paramount and therefore the data was analysed by a Foundation Year 2 doctor.

Methodology:
Questionnaire data was analysed from the academic year 2016-17. Trainees were asked to describe their educational experience in their current placement. 331 responses were obtained.
A coding frame was created to analyse qualitative data. The ‘top five’ themes where take-home messages for trainers emerged were: induction; adequate supervision; working beyond competency; Foundation Programme (FP) requirements and workplace based assessments.

Results:
Departmental induction (70 responses). A clear description of their role was perceived as vital - trainees reported they wanted to self-evaluate against what was expected. Trainees wanted to learn from peers – a department induction talk was not enough: “… I would have appreciated a session with a previous trainee”. Supervision and working beyond levels of competency (106 responses). Negative experiences centred around staff shortages or difficulty contacting clinicians. Additionally, some staff were perceived as unfamiliar with local procedures/protocols. Trainees enjoyed clinical responsibility but when adequately supervised. One trainee noted that “at the start of F1, during night shifts, I was the only doctor looking after a sick patient who was severely unwell. Thankfully, senior help arrived but this experience was probably the most beneficial to me”.
Foundation Programme requirements (123 responses). Clerical or other tasks with little educational value were seen to detract from training. One trainee commented that s/he “would spend multiple days only doing TTO’s (discharge letters) or bloods and not taking any histories/examinations/discussions with consultants”.
Completion of workplace based assessments (32 responses). Concerns focused on poor support for the assessments mandated by the FP. One trainee reported that “at times I feel it can be very busy on AMU (acute medical unit) so there isn’t much time to have seniors watch you”.

Discussion:
The themes provide an insight into common clinical placement problems. Induction could be altered to incorporate information from previous post-holders and trainers could be more overt in supporting assessments. Locum staff unfamiliar with local policies as well as a lack of clerical support are more difficult to ‘fix’. However, it is important that trainers are aware of educational barriers.
To disseminate (and address) these findings a workshop for trainers is in development. This will be trainee-led as opposed to faculty-led. We feel this will assure trainees that their voice is being heard.

References:
Bleep the Trauma Scribe! Truro Trauma Scribes: A Pilot Scheme Recruiting Undergraduate Medical Students as Major Trauma Scribes.
G Moritz, J Davies, T Geliot, B Warrick, M Lewis, L Sleep, J Brayley
University of Exeter

Background:
In undergraduate medical education the Emergency Department (ED) setting can be a busy and stressful (but vitally important) learning environment, particularly in the setting of major trauma. Furthermore, medical students throughout the UK report limited educational experience in traumatic medicine. Documentation during trauma calls is vital to assess trauma centre performance via audit and to allow learning from previous cases. Adherence to the Advanced Trauma Life Support (ATLS) protocol has been shown to improve patient outcomes, deviation from which can lead to increased intensive care unit length of stay, morbidity and mortality. Retrospective studies which rely on documentation can underestimate the compliance to trauma protocol if the documentation was not completed thoroughly and contemporaneously. Previous studies have shown that dedicated scribes in ED reduce clinicians’ documentation time by 36%, allowing greater time for direct patient care. There is no current evidence in the literature of utilising the trauma scribe role as an undergraduate educational intervention. We believe our pilot scheme recruiting undergraduate medical students as major trauma scribes will have untold benefits to both student and Emergency Department alike.

The purpose of our intervention is twofold;
1. Improve undergraduate experience and participation in major trauma.
2. Improve documentation of trauma calls as per Trauma Audit and Research Network (TARN) criteria.

Methodology:
Undergraduate medical students on clinical placement at Royal Cornwall Hospital (RCHT) were invited to an introductory teaching session. In this session they were introduced to the Peninsula Trauma Network booklet and practised scribing in this booklet using an online ATLS simulation. Students were then eligible to sign up to an online roster system for on-call shifts holding a hospital trauma team bleep. When a major hospital trauma call is activated, the on-call student is bleeped to attend the trauma call, usually in ED Resus. On arrival, the medical student introduces themselves to the trauma team lead and commences contemporaneous documentation of the trauma call, and as their experience or interest permits they may follow the patient journey through to imaging, surgery or interventional radiology. Following this, the student fills out a brief feedback and reflection form which we collate, allowing us to monitor the students’ experiences and learning and ensure student welfare.

Results:
Between 12/12/16 and 20/2/17 student scribes attended 19 out of 22 hospital trauma team activations. Completed sections of the proforma increased by 28%, number of chronology entries increased by 330% and data required for TARN submission increased by 24%. The vast majority of students felt their presence at the trauma call was beneficial to patient care and to their educational experience (88% and 84% respectively). Serial reflective statements submitted by students demonstrate growth in competence and confidence.

Discussion:
Truro Trauma Scribes is a novel educational intervention which has and will continue to improve student participation and interest in trauma. It provides a unique opportunity to encounter major trauma as a student with an active role as trauma scribe to encourage a sense of purpose and involvement as part of the trauma team. The results so far demonstrate benefit to both medical education and patient care. Ongoing student experiences and feedback will be presented at the conference.

References:

Ref: 269, Friday 13th July, 9.40-10.00am, CS
Joint undergraduate and postgraduate teaching in general practice: a case study of the continuum of medical education in practice
L Pope, S Jamieson, J Morrison
University Of Glasgow

Background:
Despite a large body of literature on teaching in general practice, the majority of this focuses on a single learner level. The Australian literature frequently refers to the concept of Vertical Integration (1), while UK policy refers to “a continuum approach”, yet no formal definition of the latter exists. This was an exploratory study of the reality of the continuum of medical education as it occurs in the context of general practice (family medicine) in the West of Scotland. Through the following research questions, this study aimed to contextualise the rhetoric:

1. How does Activity Theory enable us to understand the activity of teaching in GP practices with multilevel learners?
2. What are the tensions experienced by GPs in multilevel learner practices in relation to their teaching?
3. How have these tensions shaped the activity of teaching in multilevel learner GP practices?
4. How does Activity Theory enable understanding of continuum of medical education in GP practices with multilevel learners?

Methodology:
A collective case study approach was used, comprising two phases: an online questionnaire of 180 GP teachers (response rate 60%) and 17 semi-structured interviews. A combination of Activity Systems Analysis (ASA) and Thematic Analysis was used for interview analysis.

Results:
Five themes were identified in the interviews:
1. General practice in 2017 – The current context of workload pressures and recruitment problems in general practice impacted teaching at every level of the continuum of medical education. Recruitment to general practice was shown to be a bidirectional continuum problem.
2. External relationships - Working with at least two external organisations presented challenges for GPs. Different expectations, processes and communication channels all added to the complexity and volume of work for GP teachers in multilevel learner practices.
3. The joint teaching practice – Common facilitating factors for teaching across the continuum were a practice teaching culture and good organisation of teaching. The impact on GPs and their practices of the tension between teaching and service delivery was described and strategies to minimise this identified.
4. GP as a Teacher – The teaching, organisational and assessment tools which support teaching delivery in multilevel learner practices were highlighted. The motivators for teaching across the continuum were identified while the stress of multilevel teaching was demonstrated.
5. Near peer teaching (NPT) - In contrast to some areas, NPT in the practices in this study was relatively underdeveloped. The uncertainty related to this is described and the local and external barriers to further development of NPT presented.

Discussion:
The use of a sociocultural approach to study the continuum of medical education enabled the importance of the current context of general practice to be appreciated and facilitated identification of key teaching-related tensions and the learning that had occurred and is possible from these.
Through the use of ASA, this study conceptualised the current GP recruitment crisis as a bidirectional challenge spanning across the continuum of medical education. Demonstrating relevant tensions within the systems (e.g. the expanding practice team as both a teaching opportunity and a threat) enabled innovative practice and learning to be identified. While a structural continuum existed, the practices in this study did not fit with the Australian definition of Vertical Integration (1). This study suggests that this lack of a continuum approach originates in the separate organisational structures for postgraduate and undergraduate education. For meaningful widespread adoption of a continuum approach, these organisational tensions would need to be addressed.
This study demonstrated a gap between the rhetoric of “a continuum approach” and the reality of “a continuum”, provided evidence why that might be and presents suggestions as to how that might start to be addressed more widely.

References:
Situating Communities of Practice: Facilitators and Barriers to Healthcare Workers’ Participation at Root Cause Analysis Meetings.
D Weiand
Newcastle Upon Tyne Hospitals NHS Foundation Trust

Background:
Since January 2016, Root Cause Analysis (RCA) meetings have been mandated after every case of Healthcare Associated Infection (HCAI) leading to Staphylococcus aureus bacteraemia (SAB) and toxin-positive Clostridium difficile associated-diarrhoea (CDAD), at a large English tertiary care facility. RCAs are multidisciplinary in nature, and used to explain how incidents occur and to design mechanisms to prevent them from happening again (1). Key drivers for the introduction of mandatory RCAs include concerns about: Patient safety, including prolonged hospitalisation and increased mortality; Rising antimicrobial resistance; and the severe burden of HCAI on finite healthcare resources (2). Indeed, a significant proportion of HCAIs are preventable (3–5). The aim of this study was to explore the facilitators and barriers to healthcare workers’ (HCW) participation at RCAs, in order to facilitate a supportive learning environment at RCAs and improve patient safety by reducing the incidence of HCAI.

Methodology:
An interpretivist theoretical stance was adopted throughout the course of this research. In order to define and explore the phenomenon of HCWs’ participation at RCAs, the Communities of Practice (COP) model of learning was applied (6). This theoretical framework (described and adapted by Etienne Wenger) posits that learning is: A fundamentally social phenomenon; “Situated” in particular social and historical contexts; and requires active participation. Research participants were selected through purposive sampling, which helped in the identification and recruitment of insightful “outliers”. The major method of data collection involved six one-one-one, semi-structured, tape-recorded interviews. A reflexive diary was kept and updated throughout the study period (7,8). Data analysis involved the deductive approach to thematic analysis (9,10). NVivo 11 Pro was used to progressively code interviewees’ transcribed responses. Methodological rigour was strengthened by means of respondent validation (7,11). Research ethics approval was awarded by the Newcastle University Research Office.

Results:
This study’s results show that the facilitators and barriers to HCWs’ participation at RCAs can be largely divided into the following three broad themes: Joint enterprise; Mutual engagement; and Shared repertoire. Importantly, HCWs’ participation at RCAs can be facilitated by: Routinely performing introductions at the beginning of each meeting; Clearly stating the aims and objectives of RCAs; Being explicit with newcomers about group expectations; Encouraging a blame-free learning environment; Avoiding specialty-specific jargon; Sharing the task of completing the mandatory RCA form; and celebrating good practice wherever and whenever it is found. It is noteworthy that, since the introduction of mandatory RCAs, there has been a statistically significant drop in the number of SAB, affecting entire medical directorates.

Discussion:
This is the first study exploring the facilitators and barriers to HCWs’ participation at RCAs focussed on improving patient safety by reducing the incidence of HCAI. This is also the first exploration of RCAs more generally through the lens of the COP conceptual framework. At out facility, mandatory RCAs have proven to be a rich source of context-specific learning, leading to specific actions that have significantly reduced the incidence of HCAIs and tangibly improved patient safety. Given the high-profile nature of HCAIs, which attract considerable public and political attention, this study’s findings and recommendations are likely to be of considerable interest to an international audience. Further research is required to explore the impact of HCWs’ social and professional backgrounds on power dynamics and participation at RCAs.

References:

Ref: 092, Friday 13th July, 9.20-9.40am, C9
Towards a pedagogy of uncertainty. The case of prescribing insulin
T Dornan, C Lee, R Donnelly, D Millar, A Carrington.
Queen's University Belfast

Background:
Medical education used to pay great attention to dealing with the uncertainty of practice. This ‘pedagogy of uncertainty’ was located within apprenticeship education. Team fragmentation, and productivity pressures have, however, decimated apprenticeship education and away-from-practice competency approaches dominate. Learning to prescribe exemplifies uncertainty because junior doctors’ prescribing errors result from the complex situations within which doctors practice more than from incompetence (1). Insulin treatment is an extreme case of uncertain practice because this is a potentially lethal drug with a narrow therapeutic window, which is itself changeable.. Irrational fear of hypoglycaemia, moreover, leads to irrational treatment decisions. Given this complexity, it is notable that foundation doctors (FDs) write two thirds of UK hospital insulin prescriptions (1). A third of these contain prescribing errors (2), making insulin prescribing FDs’ riskiest task (1). We set out to develop a pedagogy of uncertainty in the context of learning to prescribe insulin.

Methodology:
This ethically approved work was conceptually orientated towards Complexity Science, the Capability-Opportunity-Motivation-Behaviour theory of behaviour change, and Empowerment Theory. We used Implementation Research methodology, to adapt a best evidence educational intervention (3) for use in ‘real-time’ Foundation Education. This consisted of bedside ‘rules of thumb’ for recognising uncertainty and mitigating error-provoking conditions: The acronym SMAC2, which FDs carried on a lanyard card, reminded them to ask: What is the SITUATION? What are the key features of MYSELF in this situation? Can I safely ACT? Have I CHECKED, and CHECKED AGAIN? We invited all 500 FDs in Northern Ireland to use SMAC2 to analyse a personally significant experience of insulin prescribing and trained 22 pharmacists, 25 doctors, 10 nurses, and 2 type 1 diabetic patients to carry out case-based discussions, where they ‘debrief’ FDs and empower them to address future uncertainty more confidently. We present here a qualitative analysis of anonymised records of the first 53 of these debriefs.

Results:
Treating sick, complex patients without support provoked uncertainty, which was compounded by team fragmentation, unclear management goals, and poor documentation. Heavy workloads and tiredness reduced FDs’ resilience. Nurses and senior doctors sometimes viewed prescribing as a menial task to be done quickly without assessing patients, despite themselves being incompetent in insulin treatment, and unwilling to take responsibility. Management plans were often lacking. This left nurses pressuring FDs, out of hours, to give ad hoc insulin doses without assessing patients. These FDs found themselves making difficult management decisions when they were busiest, support was least available, and they feared being criticised for calling on senior colleagues. Debriefers empowered the 53 FDs to make 307 statements, committing themselves to learn better practice. 151 (49%) commitments were to improve clinical management by assessing situations more carefully, double-checking prescriptions, managing clinical situations more confidently, and seeking information or help from more expert practitioners. 133 (43%) commitments were to manage themselves and their relationships with patients and other professionals more effectively; for example by being more confident to admit their uncertainty and personal limitations. 23 (8%) commitments were to learn on-the-job by, for example, checking patients’ progress and seeking feedback.

Discussion:
This research is limited by not knowing whether participants put intentions into practice or whether patients benefited. We offer these findings as preliminary proof-of-concept for a pedagogy of uncertainty, which has operated successfully in the context of contemporary UK hospital practice. Its sustainability and transferability to other contexts are, as yet, unknown.

References:
Professionalism

Location, Location, Location: Capturing GP Bashing in the Northern Region
H Finnamore, H Collingwood, K Banner, H Alberti
Newcastle University

Background:
The General Medical Council (GMC) states that doctors should “tackle discrimination”, and “respect and value each persons’ skills and contributions”.

Historically, there has been an element of competition between specialties, ranging from light-hearted banter to denigration and discrimination. The “Anti-BASH” campaign suggests that General Practice (GP) has been subject to denigration from hospital specialties.

Recruiting trainees to GP has posed a challenge, demonstrated by the under-subscription in the Northern Region. Only 78% of training posts were filled in the 2016 entry cohort.

GP specialist trainees (GPSTs) undertake their training in one of three training programme areas within the Northern Region: Northumbria, Durham Tees Valley, and Cumbria.

There is concern that GP Bashing in the Northern Region may influence Foundation Doctors’ (FD) career choices, and cause ethical erosion amongst GPSTs.

This project examines the evidence of where denigration is occurring and discusses how this issue could be tackled, in line with GMC Guidance.

Methodology:
Within their routine end of year evaluation questionnaires in 2016 and 2017 Northern Region FDs were asked:
“So far in your career, have you received any specific comments, either positive or negative, about GP as a career choice?”

Within their 6 monthly end-of-post evaluations in 2016 and 2017 GPSTs were asked:
“In this post have you had any specific comments made, either positive or negative, about your choice of career to be a General Practitioner?”

Comments were analysed by the research team and categorised: positive, negative or mixed. They were then categorised according to the nature of the comment and commentator. Comments were also categorised according to the training programme area within the Northern Region (Northumbria, Durham Tees Valley and Cumbria), although this has been anonymised during the following discussion. Results were compared between surveys to look at longitudinal trends.

Results:
In the summer of 2017, FDs and GPSTs in the Northern Region were sent the questionnaires; overall response rate to the surveys were 93% (n=766/828) and 76% (n=317/418), respectively. 37% (n=287) FDs and 51% (n=162) GPSTs responded that comments (positive, negative or both) had been made about GP as a career option.

Relative stability was demonstrated when comparing data to the previous year.

In the latest survey, 17% (n=129) of FDs reported negative or mixed comments about GP as a career choice. There was variation in the frequency of negative/mixed comments between the three training programme areas: 17% (n=76) versus 16% (n=50) versus 7% (n=5) of trainees (Figure 1a).

GPSTs reported negative/mixed comments in 8% (n=24) of responses. There was variation between training programme areas where negative comments were heard more frequently: 9% (n=17) versus 7% (n=6) versus 3% (n=1).

Although there appeared to be variation in the comments across the training programme areas, there was no statistically significant difference.

GPSTs report that negative comments are heard proportionally more frequently in secondary than primary care.

Discussion:
Denigration of GP is happening within the Northern Region. Foundation Doctors report negative comments more frequently than GP Trainees, its occurrence is more common within hospitals, and there was variation across the training programme sub-locations.

Consequently, we must address discrimination in order to promote GP training. Larger proportions of negative comments about GP are arising in secondary, rather than primary care. This may be related to preconceived ideas about GP from hospital colleagues.

Based on the trainees’ free text comments, some suggestions as to how to reduce denigration, and promote GP as a positive career include role-modelling, raising awareness of the impact of denigration, promoting a zero-tolerance approach.
References:

Ref: 318, Friday 13th July, 9.20-9.40am, Barbour Room West
Undermining behaviour and bullying towards medical students: A case of conflicting views?
K Warren, K Jones
Swindon Academy, University of Bristol

Background:
Undermining behaviour and bullying within the medical profession is common and can result in detrimental effects to doctors’ confidence, physical and mental health, and on-going training (1). This is an issue also affecting medical students. Our recent research, looking at undermining behaviour and bullying towards medical students studying at the University of Bristol, found that a significant proportion of survey respondents had experienced, or witnessed, such behaviours whilst on their clinical placements (71.3% and 82.4%, respectively) (2). Interestingly, a significant number of reported behaviours related to students being made to feel “in the way” or students having no allocated role within a clinical team. Could it be possible that some of what our medical students report as undermining behaviour or bullying may be due to differences in perception between them and the clinical staff they work with? Here, we aim to uncover doctors’ views on this difficult subject and to raise awareness among those who may work with medical students.

Methodology:
An online survey has been developed and will be distributed via email to all practising doctors within the Severn Deanery. Doctors will be presented with a summary of the results from our aforementioned research into undermining behaviour and bullying towards medical students and will be asked their views on these. Questions asked will ascertain how regularly doctors witness students being on the receiving end of undermining behaviour or bullying, along with their views on a number of behaviours described by medical students in our original research. Free text boxes will be included for doctors to describe any specific events they have witnessed, and for them to make suggestions on ways in which undermining behaviour or bullying toward medical students, or practising doctors, could be tackled. Participation in this research will be voluntary and all results anonymised.

Results:
Formal results are awaited. Descriptive statistics will be presented, along with results from thematic analysis intended to explore the specific nature of any undermining behaviour or bullying incidents witnessed, and suggestions for tackling such a problem.

Discussion:
Reported rates of undermining behaviour and bullying towards medical students from the University of Bristol are high. A significant proportion of reported behaviours relate to students feeling ignored and having no specific part to play within a clinical team. A contributing issue here could be increasing pressures on the NHS and competing demands for doctors’ time meaning they have less opportunity to teach (3). Undermining behaviour and bullying, towards medical students and doctors, can have a negative impact on self-esteem, progression through training, and even patient safety. It is therefore highly important that we identify, and address, this issue at an early stage.

References:
Are efforts to attract graduate applicants to UK medical schools effective in increasing the participation of under-represented socioeconomic groups? A national cohort study.

B Kumwenda, J Cleland, R Greeatrix, R Mackenzie, G Prescott
University of Aberdeen

Background:
Attracting graduates was recommended as a means of diversifying the UK medical student population.[1] Graduates now make up nearly a quarter of the total medical student population. Research to date has focused on comparing the socio-demographic characteristics of applicants to and/or students on traditional and graduate entry programmes (GEMs), yet GEMs account for only 40% of the graduate medical student population. The broader picture of whether graduates and non-graduate applicants to medicine differ on a range of socio-demographic variables is relatively known. The Selecting for Excellence Final 2014 Report highlights that ‘it is hard to determine whether graduate applicants have any significant impact on widening participation.[2] Thus, we aimed to compare the socio-demographic characteristics, particularly those associated with widening participation [3], and outcomes of graduates and non-graduate applicants across a range of programmes

Methodology:
This was an observational study of 117214 applicants to medicine who took the UK Clinical Aptitude Test (UKCAT) from 2006 to 2014, and who applied to medical school through Universities and Colleges Admissions Services (UCAS). We included applicants’ demographics and contextual markers, UKCAT total scores and application outcome (offers/rejection) in our analysis. Applicants were assigned as graduates or non-graduates on the basis of their highest qualification. The socio-economic status (SES) of the candidates was determined by parental National Statistics Socio-Economic Classification (NS-SEC) and Index of Multiple Deprivation (IMD), an area-based measurement of material deprivation. Multiple logistic regression was used to predict the odds of receiving an offer, after adjusting for confounders.

Results:
Irrespective of graduate or non-graduate status, most applicants were from the highest socio-economic groups and were from a white ethnic background. Graduates and non-graduate applicants from top 20% affluent neighbourhoods (IMD 1) obtained better UKCAT scores than applicants from the 20% most deprived areas (IMD 5). Receiving an offer was related to gender and ethnicity in both graduates and non-graduates. After adjusting for UKCAT score, the odds ratio of an offer for graduates vs. non-graduates was approximately 0.5 (OR=0.48, 95% CI 0.46-0.49).

Discussion:
Unlike previous studies in this area, we compared a larger sample of graduate applicants with non-graduates, rather than comparing by course (traditional versus GEM). This allowed us to capture the characteristics of a broader group of graduate applicants compared to earlier studies. Our results show that graduate and non-graduate applicants to UK medical schools are very similar on a range of socio-demographic markers, including multiple markers of socio-economic status. Overall, we found that graduates were proportionally less likely to receive an offer than non-graduate applicants, and those graduates who were offered places had significantly higher UKCAT scores than their non-graduate equivalents.

Our study recognises the problem of allocating graduate applicants to an occupational group that depends on their family circumstances (area, parental occupation). However, the findings indicate that the aim of diversifying the medical student population on socio-economic grounds by attracting graduates has been only marginally successful. Graduate applicants from widening access backgrounds are less likely than others to be offered a place at medical school. Different approaches must be considered if medicine is to attract and select more socially diverse applicants.

References:

Ref: 029, Wednesday 11th July, 5.20-5.40pm, Barbour Room West
Teaching About Specific Subjects

A Widening Participation course utilising Emergency/Acute Medicine in high fidelity simulations improving insight, motivation, and confidence when applying for an undergraduate career in healthcare

N Leanage, D. Klöcker
LNR Foundation School

Background:
Junior Emergency Medicine (JEM) is a two-day course aimed at prospective healthcare students from a widening participation background with the aim of inspiring them to pursue a career in healthcare. JEM has been running annually since 2015 in Leicester and debuted in Birmingham in 2017. Through high-fidelity simulations, students gain a better insight into future careers in medicine and allied healthcare professions, and improve their confidence and motivation when applying to University. According to the Medical Schools Council, 80% of medical students come from 20% of schools (1). The Social Mobility Commission has stated that only 4% of Doctors come from a working-class background (2). With this in mind we need to be looking at pupils who may not be offered the same opportunities in order to move away from this ‘elitist nation’ tag (3). There is a clear need nationally to for increase support for widening participation and the JEM model is easily reproducible and could be up-scaled.

Methodology:
JEM uses a mixture of lectures, skills workshops and seminars to help prepare its delegates for the simulations and interactive cases based on the taught material. 3 of 8 interactive cases are based in acute psychiatry with the remaining being a mix of acute medicine and surgery. The four simulations are centred around the ABCDE approach with delegates working in groups to assess the simulated patients guided by a senior medical student. A supplementary workbook for the course to ensure that students can become enriched in the environment is provided. A survey was conducted at the end of the course measuring; student satisfaction, motivation to pursue healthcare, understanding of admissions, confidence in applying, insight into healthcare. In addition, feedback was sought for all simulations.

Results:
Between 2015 and 2017 a total of 177 students participated and completed the end of course survey. Of these, 98.6% found skills workshops were useful, 97.6% found the emergency simulations useful, 98% felt that JEM increased their motivation to pursue a career in healthcare, 92.3% felt JEM increased their confidence and 98% felt JEM helped them prepare for the University admissions process. Throughout the 3 years JEM has run in Leicester 98.3% of students feel that it has increased their understanding of the clinical environment. In 2017, we also measured the understanding of clinical environments pre- and post-JEM and found by the end of the course, 95% felt their understanding was good (rising from 73% pre-JEM).

Discussion:
Through evaluating the JEM model and student outcomes we believe that JEM achieves its aims. Students who have participated in a JEM course leave feeling more confident and motivated about a future career in healthcare, have a better insight into what that career might involve and have a better understanding of how to apply for an undergraduate healthcare degree. We plan to look at how student participation with JEM translates to future offers for medicine or other healthcare related degrees. JEM has been expanded to Birmingham for the first time this year with data collection currently underway however at first glance the results are extremely positive. Due to its success across the Midlands, we feel that JEM should be rolled out on a national scale to provide valuable opportunities and experiences to students around the country who come from a widening participation background.

References:
1. Medical schools get targets to boost intake of applicants from disadvantaged backgrounds, BMJ Careers, 12/12/14, http://careers.bmj.com/careers/advice/view-article.html?id=20020403, Last accessed 5/1/18
3. Just 4% of UK doctors come from working class backgrounds, BMJ Careers, 23/11/16, http://careers.bmj.com/careers/advice/just_4%2525_of_UK_doctors_come_from_working_class_backgrounds#ref1, Last accessed 5/1/18

Ref: 081, Wednesday 11th July, 3.20-3.40pm, Barbour Room West
Changes in medical students’ knowledge and attitudes towards Evidence Based Medicine following a multi-faceted, clinically integrated curriculum

S Ratnakumar, H Jenkins, J Hearn, S Chepkin, B Kumaravel
University of Buckingham

Background:
The University of Buckingham Medical School is committed to longitudinal learning encouraging students to apply subject matter to clinical practice. Evidence Based Medicine (EBM) is being integrated throughout the curriculum, starting from year one. However, students’ feedback in 2016 suggested that the clinical relevance of EBM was not clearly understood. This is not unique to our medical school; previous research has highlighted difficulties in teaching EBM (1,2). Informed by evidence, the faculty introduced a multi-faceted, clinically integrated EBM curriculum (3). The aim of this study was to evaluate the effectiveness of a multifaceted, clinically integrated EBM curriculum in improving students’ knowledge and understanding of the relevance of EBM to clinical practice.

Methodology:
A before and after study design was used. A student champion researched for evidence of an effective EBM curriculum and suggested changes to the course content and delivery in 2017. Lectures were followed by case-based discussions to apply knowledge in case studies. Simulated videos were developed to demonstrate the relevance of EBM to clinical practice. This was supplemented by formative assessments, online educational material such as interactive quizzes & recorded lectures.

The validated Fresno test of competence in EBM was used to assess EBM knowledge pre-intervention (n= 37) and post-intervention (n= 9)(4). In addition, a comparison of scores was also carried out on the eight students who completed the test at both time points. A survey carried out both pre-intervention and post-intervention gathered attitudes, personal application, anticipated future use, perceptions of relevance and knowledge of EBM (5). At the end of the module, students were invited to participate in a focus group discussion. A purposive sample (n=5) included students with a range of familiarity to EBM concepts. Discussions were recorded, transcribed and thematic analysis used to explore student perceptions.

Results:
Knowledge was evaluated using scores from the Fresno test. For the 37 students who completed the pre-module test, the mean score pre-intervention was 20% (95% CI 11.79-25.61); while post intervention, for the nine students who completed the test it was 63.2% (95% CI 44.23-78.57). For the eight students who completed the test at both time points, the Wilcoxon Signed-Rank test was used to test the hypothesis that test scores were higher at the end of the module. The mean difference in score was 31.5 percentage points and the increase was again statistically significant at the 95% level. Pre-intervention survey results suggested that 65% of the students (n=24) agreed that EBM is important to their practice as a doctor. This showed a minimal increase to 75% post-intervention (n=6).

The focus group highlighted a positive change in attitudes and improved understanding of the relevance of EBM to clinical practice. Key themes identified were increased students’ perceptions of the relevance of EBM to clinical practice; preference for workshops over lectures for literature searching skills; having sample critical appraisal of epidemiological studies and incorporating EBM teaching across the curriculum.

Discussion:
A multi-faceted, clinically integrated EBM curriculum appears to have improved students’ EBM knowledge, as measured using a validated tool. The impact on perceived clinical relevance of EBM is less clear, with minimal evidence of a difference on survey. Yet, a positive change in attitudes and perceived relevance was reported by focus group participants.

Results will be used to inform future module design and delivery. One will continue to follow this cohort of students into clinical rotations of their undergraduate curriculum and determine if there are further improvements in students’ knowledge and their perceptions.

References:
http://journalsofethics.ama-assn.org/2013/01/medu1-1301.html

Ref: 023, Wednesday 11th July, 3.40-4.00pm, Barbour Room West
Teaching About Specific Subjects

It’s only words...? Exploring the terms used by Tomorrow’s Doctors in relation to Older People

J Fisher, E Tullo, J Stewart
Northumbria Healthcare NHS Foundation Trust

Background:
The UK population is ageing and older people are already core business for the NHS. The language used by health professionals when referring to older people is critically important, since negative stereotypes of older patients are held by medical students(1) and pejorative terminology may become a barrier to quality care(2). Using a bespoke teaching intervention for final year medical students that challenged the use of such terms, this project aimed to:
a) deconstruct the language and phraseology used by medical students when referring to older people; and b) discern whether there was a detectable difference in medical student ‘attitudes’ towards older people after a targeted teaching session.

Methodology:
Participants were final year MBBS students at a UK medical school; all provided informed consent. The teaching intervention formed part of their Hospital Based Practice module. Ethical approval was obtained from our local university ethics committee. During the introductory plenary small groups of students were asked to write words or phrases they “associate with older people in hospital” on A0 paper in black ink. After completion of the teaching session, students returned to the same small groups and were given their original A0 paper along with red-ink pens. They were then asked to: a) add additional words or phrases that they now associated with older people; b) make any amendments they wished to words or phrases they previously recorded; c) score out any words or phrases that were no longer pertinent or applicable. All words and phrases captured were transcribed and before and after comments were differentiated by the ink colour used. A three-stage approach to analysis was then employed: 1) simple content analysis was undertaken, where identical or equivalent words were grouped together and counted.
2) Similar topics were grouped together and labelled. Re-shuffling and re-sorting took place as labels became redundant and others emerged. Over-arching descriptive labels were identified to capture the essence of their content. 3) Each section was reviewed and meaning construed. An iterative approach to analysis was employed, where a second researcher independently reviewed each stage of the analysis, checked for appropriateness of groupings and offered alternate interpretations of the data. Differences were discussed and adjustments made. Rigour was maintained by involvement of a third researcher, who was not involved in data collection nor analysis, to sense check the final analysis and offer critical review of the interpretation.

Results:
47 students participated in the teaching intervention across three separate occasions. Analysis generated three overarching categories: medical features relating to older people, care features relating to older people and social and personal features relating to older people. Results will be presented in greater detail, along with explanation of the nature of the teaching intervention itself.

Discussion:
Analysis suggested a change in the language used by students - new terminology entered the student lexicon and students amended, and in some cases deleted, previously used terms. A growing appreciation of the complexity of caring for older people was evident and notably, changes in several coding categories alluded to a change in students’ views as to their own professional responsibilities. This is an important finding, since failure to take ownership for older patients has been identified as a barrier to good care(3). Of concern however, was the use of pejorative, nihilistic language in relation to older people, which was shared openly despite the professional setting and the presence of senior colleagues. Future work could explore provision of opportunities for longitudinal follow up with ‘well’ older people post-discharge from hospital to help challenge negative constructs and to re-frame unhelpful perceptions of older people.

References:

Ref: 253, Wednesday 11th July, 4.00-4.20pm, Barbour Room West
The proof is in the tasting. Using a dietician led workshop to improve the knowledge and attitudes of medical students towards clinical nutrition

C Timms, H Best, L Webb, K Jones
Swindon Academy, Great Western Hospital, University of Bristol

Background:
Good nutrition can significantly improve the global burden of disease. Both medical students and junior doctors report lack of knowledge of clinical nutrition and its application. They also feel they receive insufficient nutrition education at medical school. Barriers to nutrition education include: lack of specialist teachers, curriculum crowding and time pressures. The Need for Nutrition Education/Innovation programme has shown for a successful educational nutritional initiative three factors are needed, multidisciplinary approach, variety of teaching modes and advocacy skills of the educational team. Furthermore dieticians have previously reported confidence in their abilities to teach and believe they are best placed to teach clinical nutrition to medical students.

Methodology:
After an initial focus group, the dietetics and nutrition department at The Great Western Hospital designed a nutrition workshop for medical students to participate in during a 4 week Medicine for the Older Person rotation. Students are given a pre-workshop multiple choice question test and a questionnaire, using Likert scores and free text boxes which explore their current attitudes towards nutrition, including their preparedness to advise a patient regarding nutrition and confidence in assessing a patient’s nutritional status. These questions were based on previously critically appraised research questions for use in medical nutrition education research. The students participated in a carousel style teaching session on clinical nutrition, led and taught by the dieticians and nutrition nurses, covering MUST calculations, oral nutrition supplements, including tasting the supplements, feeding tubes and parental nutrition. The knowledge test and attitudinal questionnaires were then repeated after the session. The students also completed a further post-test questionnaire and focus groups discussing their views on the dieticians as medical educators and their learning experience.

Results:
Following the first two of eight workshops planned for the academic year, all students improved their knowledge after the session, they also felt more prepared to give nutritional advice to patients and more able to accurately assess a patient’s nutritional status. On discussion with the students the attitudinal changes included, “it is the responsibility of doctors and others to assess and treat malnutrition” and “we need to be much more proactive”. All students agreed or strongly agreed that dieticians should be involved in medical education. Some commented specifically that the dieticians have “particular expertise in this area, and know specifics beyond the role of doctors”, and compared to doctors they have “more experience and insight”. All students would recommend this session to a colleague.

Full thematic and descriptive statistical analyses will presented at the conference.

Discussion:
Given the results of the initial workshops, we believe the session can improve the knowledge and attitudes of students towards nutrition, further to this we hope to show that using dieticians as medical educators is seen as an advantage by students and they can be utilised to counteract the difficulties encountered in nutrition teaching in medical education.

References:

Ref: 124, Wednesday 11th July, 4.20-4.40pm, Barbour Room West
Teaching medical students to treat unwell patients: Simulation or Case Based Discussions?

M H Iqbal, A Haq, A Said, A Foster, P Solanki
Princess Alexandra Hospital

Background:
It is widely acknowledged that medical students do not receive enough training in recognition and treatment of acutely unwell patients (1). As soon as an emergency situation occurs, medical students are generally moved aside and a great teaching opportunity is lost. To try and combat this issue, and develop competent doctors on qualification, numerous teaching initiatives have been instigated. The most common type is simulation training of various fidelities and the evidence for its usefulness is widely published (2). Another way is via case based discussions, focusing on the patient pathway from assessment to treatment and the various discussion points at different times. There is, however, very little information comparing these different types of teaching and which medical students prefer. Thus, at Princess Alexandra Hospital NHS Trust (PAHNT), we performed a study assessing the medical student’s perspective of these different teaching modalities.

Methodology:
There were a total of 19 final year medical students, across 2 groups, on placement at PAHNT. Each group experienced 8 high fidelity simulation scenarios spread over 6 weeks. Likewise, the students received weekly case based discussion tutorials (5 in total) involved different emergency cases with emphasis on assessment, investigations, recognition and treatment. Following the end of their placements, students were requested to complete a questionnaire comparing simulation training to CBD both quantitatively and qualitatively.

Results:
We received feedback forms from 14 medical students. 85.7% of students rated the simulation training as excellent and 14.3% as good. This compared to 57.1% rating the CBDs as excellent, 28.6% as good and 14.3% as average. All students preferred simulation over CBDs. Students were asked whether they would prefer just simulation sessions, just case based discussions or both, and all students preferred to have both. Students were also asked about the advantages of one modality over the other. In regards to advantages of simulations, students commented on the opportunity to practice management of clinical scenarios in realistic settings and the hands on practical side rather than just theory. In regards to the advantages of CBDs, they commented on the ability to assess cases more thoroughly and take time to go through management, easier for more people to get involved and more in depth discussions.

Discussion:
There are several different methods available when training medical students to deal with acutely unwell patients. Focusing on simulation and CBDs, CBD sessions have significant advantages of allowing more students to train in larger group and sufficient time to ensure all elements of patient care are discussed. However, its significant disadvantage is the lack of practical skills training which is provided during simulation training. Furthermore, simulation sessions allowed candidates to test their knowledge in recognising and dealing with acutely unwell patients in a fully immersive setting.

Although the candidates preferred simulation training in comparison to CBD, all provided feedback on the importance of having both. It is widely recognised that students have different learning preferences and styles (3) and as simulations and CBDs use different educational theories it is likely that there may be some preference of one over the other. Simulations provide education via experiential learning (learning by doing) and is likely to be preferred by the kinaesthetic learners, whilst CBDs using social constructivism (building on previous knowledge through social interactions) and may be preferential to the audio and visual learners. Encompassing both helps to ensure that the majority of learning styles can be addressed for this critically important topic.

Conclusion: When training medical students to manage acutely unwell patients, it may be appropriate to incorporate both CBD and simulation training modalities.

References:

Ref: 045, Wednesday 11th July, 4.40-5.00pm, Barbour Room West
‘Zombies teach dermatology better!’: Consolidating undergraduate dermatology teaching with an Escape Room game

J Guckian, A Sridhar, S Meggitt
Newcastle University

Background:
Undergraduate dermatology teaching usually involves seminars, lectures and a mixture of opportunistic teaching [1]. Pressures on outpatients and staff may hamper the capacity to teach students in dermatology clinics, with studies stressing the need for more innovative means of teaching dermatology in this context [2]. A significant proportion of UK medical students express a lack of confidence in dermatology knowledge and skills [3]. Escape rooms are immersive team-based games involving participants solving puzzles in order to escape a room. There is emerging evidence of such tools being used in medical education [4], however this is as yet undocumented in dermatology.

Methodology:
101 stage 3 medical students at Newcastle University received a one hour lecture as an introduction to the basics of dermatology. Following this, all students were invited to a non-compulsory escape room session aimed to consolidate lessons taught during the lecture. The escape room had a ‘zombie apocalypse’ theme, featuring an outbreak of a deadly skin disease. In the game, teams of students were required to undertake seven tasks involving dermatology skills or knowledge. These included a terminology quiz, topical treatment prescribing and literature review.

Following the session, students were asked to complete a 25-point questionnaire regarding impact of the session on their interest in dermatology, confidence in taught content and reflection on weaknesses.

Results:
16 students took part in the escape room sessions, in 3 small groups. Feedback was strongly positive, with 100% of students expressing ‘strongly agree’ in terms of their enjoyment. Themes from student reflections included learning from team members: despite only 6 students expressing that they ‘taught others in their team’, all students felt that they had learnt from team members. 15 students (94%) expressed an interest in experiencing more dermatology as a result of the escape room.

Discussion:
This session is an example of how escape rooms can be an enjoyable method of consolidating lecture-based content. The sessions are not without limitation: numbers were kept small due to practical challenges of running the escape room, and it is not certain that improved confidence in dermatology or enjoyment of a session improves clinical acumen. However, in an environment of pressures and busy clinics, escape rooms may present an alternative means of engaging medical students with dermatology and consolidate learning from traditional methods.

References:
A fresh pair of eyes; a qualitative study looking at first year medical students’ reflections on NHS service provision.
S Stuart, S Atkinson, P Rusby, H Emery, T Subramanian, J Sansom
University Hospitals Bristol NHS Foundation Trust

Background:
Do our perspectives on healthcare innovation change as we become more established within the NHS, and could a fresh pair of eyes offer new a perspective? This study aims to tap into the first year medical students’ inexperience and see whether this may offer new insights into healthcare provision as well as embedding a positive culture of innovation and change. Whilst the involvement of medical students in Quality Improvement (QI) is not new, the focus of activities is largely on teaching QI methodology to more experienced students and trainees, with relatively little impact upon patient care [1].

With the introduction of a new Healthcare Assistantship Programme, Bristol medical students are being introduced to clinical medicine in their first year. Building on the capacity of critical reflection to promote patient safety [2], this study will look at unmodified reflections of first year medical students following their first exposure to hospital life and investigate whether this generates novel ideas for improvements in service provision.

Methodology:
First year medical students will shadow a Nursing Assistant for five shifts across four weeks. Students will be recruited via email before their first shift and asked to complete a diary following each shift. They will be asked to reflect on what aspects of the shift worked well and what aspects they would change or improve. They will be asked to focus on certain areas e.g. ward flow, patient care and different roles healthcare professions play in patient care. The qualitative data will then be reviewed, thematically analysed [3] and reported to the NHS Trust and University, with recommendations for change. We will give the students the opportunity and support they need to develop their ideas into a QI project. We will present the students’ ideas and the results of our evaluation.

Results:
A full analysis will be presented.

Discussion:
Medical student involvement in QI is usually viewed as a valuable learning opportunity for the student [4], but this study will discuss whether students are able to offer a useful contribution to patient safety and care. It will analyse the nature and value of students’ suggestions for change, and consider how the role of medical students in patient care can be developed in ways which are beneficial to both patients and students. The unique perspective of early stage medical students will also be considered, and how their developing professional identity [5] colours their reflections on clinical experience.

References:
2 Ambrose LJ, Ker JS. Levels of reflective thinking and patient safety: an investigation of the mechanisms that impact on student learning in a single cohort over a 5 year curriculum. Advances in Health Sciences Education. 2014 Aug 1;19(3):297-310.
Evaluating the usability and acceptability of the discharge summary feedback (DSF) tool – field-testing in clinical practice with foundation doctors.

R Kinston, L Corfield, A Craig, C Chean, T Downes, J Lefroy
Keele University

Background:
Accurate and timely transfer of information about patient care and treatment across the healthcare interface is vital to ensure patient safety. UK survey data of GPs reported that this information is frequently inadequate(1). In the UK, foundation doctors are responsible for producing the majority of discharge summaries, although most receive no training as part of their medical degree. When training is received, it is frequently felt to be inadequate(2). The GMC recommends that all senior medical students undertake assistantship training prior to graduation(3). During their assistantship, it is desirable that students gain experience of all duties performed by foundation doctors(4). Supervised participation of these duties actively promotes learning, allowing the student to develop necessary technical and non-technical skills required for graduate practice(5). Work based observation and feedback has shown to enhance learning(6). Our aim was to develop and evaluate a discharge summary feedback (DSF) tool that could be used to enhance the acquisition of this skill amongst senior medical students.

Methodology:
In developing the DSF tool, the national recommendation for the core content of a discharge letter was reviewed(7). We also searched for work based assessment tools designed to assess clinical correspondence. Those currently available were limited to assessing paediatric letters(8) and to our knowledge they have not been utilised for medical students. Utilising focused discussion on about the proposed content and form of the DSF tool, a prototype was created. We used an iterative approach of review and refinement to develop the DSF tool until consensus was reached. Faculty members at Keele University (all practising clinicians) and a range of junior doctors from one of its teaching hospitals were involved in this process.

To field test the usability and acceptability of the DSF tool, a faculty member and senior clinician recruited foundation doctor volunteers over two hospital sites to receive feedback on their discharge summaries using the DSF tool. Once the feedback had been given, the participants were invited to complete a questionnaire to evaluate the usability and acceptability of the written feedback given using the DSF tool in clinical practice.

Results:
Ten foundation doctors volunteered to participate in the field test of the DSF tool and completed the questionnaire. All participants reported they wrote discharge summaries either daily or multiple times each week. In total, 40% of participants had requested feedback but only 30% had ever received feedback on their summaries. When feedback was provided, it was given verbally. All the participants agreed that the DSF tool was a practical teaching tool, encouraged learning of what should be included in a discharge summary and felt the tool helped preparation for the foundation doctor role. A total of 90% of participants agreed that the tool would encourage constructive feedback after completing a discharge summary and would develop confidence. Participants reported the tool’s strengths were its descriptors of what should be included in content and that its use prompted and encouraged the provision of objective feedback. Participants suggested that the DSF tool could be improved by providing a broader range of descriptors of the performance level observed.

Discussion:
Performing routine clerical duties, such as writing hospital discharge summaries, are vital for the handover of information and co-ordinating on-going patient care. Proficiency in writing hospital discharge summaries is a necessary Foundation doctor skill. Errors in communication are a frequent source of patient safety incidents. Work based observation and feedback of discharge summaries using the DSF tool was both acceptable and useful to foundation doctors who agreed it would help preparation for the foundation doctor role. A pilot study evaluating the DSF tool with senior medical students is planned.

References:
4. Crossley JGM, Vivekananda-Schmidt P. Student assistantships: bridging the gap between student and doctor. Advances in Medical Education Practice. 2015; 6 447–457

Ref: 233, Thursday 12th July, 2.40-3.00pm, Sage 1
Maximising the learning opportunities for undergraduate medical students from medical ward rounds

N Devani, J Taube, R Hall, R Gell, M Mackenzie, P Dilworth
Royal Free NHS Trust

Background:
Medical ward rounds are a powerful teaching resource which expose students’ to the complexity of patient care and challenges of clinical practice1. Despite this, student’s often regard ward rounds as poor learning experiences2 reporting feeling like they ‘are just in the way.’ Compounding this is an increasing demand on service provision with clinicians finding it difficult to juggle their clinical responsibilities with those of delivering effective teaching.
We sought to optimise the learning experience from medical ward rounds, without burdening clinical teachers with an increased workload, and utilise them as an opportunity to better prepare students for their future careers as doctors.

Methodology:
We are piloting a structured ‘teaching ward round’ concept for students attached to Respiratory and Acute Medicine teams during their first clinical year at the Royal Free Hospital, London. Each week 2 students are assigned to attend ward rounds. On the morning of the designated rounds, they attend a multi-disciplinary board meeting and are each assigned an inpatient. The student spends the first 30 minutes clerking the patient before re-joining the ward round. When the round reaches their patient, the student presents the case, reviews the investigations and partakes in formulating a management plan with the team. The student is then tasked with documenting the ward round entry in the notes (under supervision) while the senior clinician performs a further review. At the conclusion of the round, the clinicians are encouraged to provide feedback to the student on their presentation skills and quality of ward round documentation.

Results:
To date, 30 students have rotated through respiratory and acute medicine since the introduction of the structured teaching ward round. 60% had an opportunity to clerk and present a patient on the round with most rating the experience highly valuable (a mean rating of 9 (Standard Deviation (SD) = 1.7) on a 10-point visual analogue scale (VAS) with 1 being not valuable at all and 10 being very valuable). Students reported improved confidence in summarising and presenting patient cases after the round with an average change in confidence ratings of +1.8 compared to before the round (measured using 10-point VAS with 1 being not at all confident and 10 being very confident both before and after). Additionally, 75% of students had an opportunity to document a ward round entry in the notes with most rating the experience highly valuable (mean rating 8.5 (SD = 1.2) using a similar VAS to above). The students felt more confident in their ability to accurately document a ward round entry with an average change in confidence ratings of +2.7 when compared to before the teaching ward round.
Overall, those students who were given the opportunity to clerk and present a patient rated their learning experience and level of involvement highly with a mean score of 7.9 (SD = 1.8) and 7.3 (SD = 1.4) out of 10 respectively. This compares to mean scores of 5.1 (SD = 2.3) and 4.5 (SD = 2.4) out of 10 for those not given this opportunity. We plan to continue evaluating the next cohort of students and have also recruited a selection of students and clinical teachers to undertake structured interviews designed to capture more detailed feedback.

Discussion:
Our structured teaching ward rounds provided the students with ‘hand-on’ experience in patient management and clinical reasoning and better involved and integrated them in the team. The students rated their learning experiences highly and felt more confident when clerking, presenting patients and documenting clinical encounters. Following wider dissemination of this concept, we hope that the students might eventually act as an extra team member which could in turn help improve the efficiency and running of the round for the clinicians. In this way, we hope that high quality teaching can be delivered on a ward round without increasing a clinician’s workload.

References:
2. Hunukumbure D., Welsh S., Das S. Exploring the modern day learning in ward rounds from the student perspective [abstract]. In: Annual Scientific Meeting of the Association for the Study of Medical Education (ASME); 2015 Jul 15-17, Edinburgh. ASME Conference Papers 2015. Abstract nr 192

Ref: 364, Thursday 12th July, 2.20-2.40pm, Sage 1
At the end of the day, it's just a dummy: Medical students' perspective of patients in simulation
N Mordi, B Burford, G Vance, R Thomson
Newcastle University/Northumbria healthcare foundation trust

Background:
In simulation design we often focus on accurately representing elements of clinical practice, that is, increasing the fidelity of the simulation. We aim to recreate clinical contexts focusing on the environment and tasks that we can objectively replicate, and we can justify our methods with theories such as Situated Learning theory which emphasises the importance of learning in context.

One of the most difficult, but most important, aspects of the clinical context to replicate is the patient. The quest for a “high fidelity” patient has led to the development of increasingly sophisticated manikins and trained role-players to maximise the authenticity of the simulated interactions. These methods accurately depict the outward appearance of a patient, but not necessarily what it means to be a patient. As educators we aim to promote patient-centred, empathetic care, but how do our learners perceive the patient in simulations and how might these meanings influence their behaviour and practise? This paper presents some answers to these questions from a learner perspective and suggests how this might be managed.

Methodology:
In-depth semi-structured interviews addressing perspectives on fidelity were conducted with 6 undergraduate students and 3 postgraduate doctors. They were analysed using interpretative phenomenological analysis methodology. Ethical approval for this study was granted by the Faculty of Medical Sciences at Newcastle University.

Results:
“The Patient” was found to be a contributing influence to the experience of fidelity representing one super-ordinate theme in the study. Two sub-themes related to the patient included ‘The patient is a barrier’ – related to progressing through the simulation, as patient actions such as stating the they are in pain is perceived as “challenging behaviour”. The second theme ‘The patient is a canvas’ on which to demonstrate competence where focus in the simulation is on “showing what you know” rather than developing rapport. The key reason for these views of the patients was the perception of simulation as an assessment.

Discussion:
This study highlights the difference between how healthcare professionals (HCPs) view patients in educational contexts versus workplace clinical contexts. This then has implications for the important emotional component of consultations. These ideas have been discussed in papers such as Atkins et al (1) and McNaughton and LeBlanc (2) who both argue that empathy is reduced to a behaviour in simulations and by making emotions a competency to be assessed we are devaluing their role in care. Currently all aspects of simulations, including the patient role, are created by healthcare professionals. Even where role players are used, the script is often written by HCPs. The medical perspective is therefore always what is portrayed, which could have inadvertently generate negative perceptions messages to learners which may transfer to real clinical settings.

Could the patients’ voice truly be heard in simulations? It might be that patient involvement in simulation and scenario design, as in other aspects of medical education, may help to solve a fundamental barrier to fidelity. The aspiration therefore is that this will better translate to patient-centred care.

References:
Can we use multiple choice questions to assess public health, sociology, psychology and research methods? Data from the UK Medical Schools Council Assessment Alliance question bank

E Hothersall, S McAleer, V Rodriguez
University of Dundee

Background:
Multiple choice questions (MCQs) are increasingly used in undergraduate medical assessment in the UK, but there is an absence of evidence for assessment of public health, sociology, psychology and research methods (PHSPRM) topics (1). We conducted a systematic review of MCQs from the UK Medical Schools Council Assessment Alliance (MSCAA) bank (2) to describe the questions available for assessment for PHSPRM topics and to investigate whether such questions can be considered a valid form of assessment of these topics.

Methodology:
In 2017, we identified PHSPRM MCQs from the MSCAA. Questions were categorised by learning outcomes, cognitive skill, topic, content and task. Questions with performance data were described as “high” performing using a cut-off of discrimination or point biserial ≥0.2.

Results:
113 MCQs were identified which were “live” (either validated (10) or unvalidated (103)), and a further 215 which were rejected (“dead”). Of the live questions, 23 questions were psychology (23.0%); public health 36 (31.9%); research methods 47 (41.6%) while sociology had 4 (3.5%). 89.4% of questions assessed comprehension and application, 8.0% knowledge, and 2.7% problem-solving.

Combining live and dead questions, 53% of all questions used were public health, 2.5% were sociology. Mean facility overall was 0.55 (standard deviation 0.27), mean discrimination 0.15 (0.12), and mean point biserial 0.09 (0.12).

There were significant differences between learning outcomes for facility, discrimination and point biserial. Discrimination and point biserial were significantly higher in the validated questions compared to the dead or unvalidated questions.

High performing questions generally tested public health or research methods, and were more likely to be knowledge-based questions. Low performing questions were more likely to assess psychology or sociology. >40% of questions in both high and low performing groups contained flaws.

Discussion:
Some specific areas of PHSPRM can be validly assessed using MCQs, particularly the topics of epidemiology, infectious diseases, occupational health, screening or statistics. However, this represents only a small fraction of the required knowledge. There is a risk of over-representation of aspects of these topics, simply because they can be easily included in existing assessment methods. There is an urgent need to develop other assessment tools for PHSPRM topics.

References:

Ref: 221, Friday 13th July, 10.00-10.20am, C5
Evaluation of CREATE: a workplace-based assessment instrument designed to construct higher order cognitive skills among health graduates: a mixed method study.

B Veasuvalingam, M Saiful Bahri Yusoff
Newcastle University-Malaysia campus

Background:
Capability for higher order cognitive skills such as clinical reasoning, critical thinking, problem-solving skills and knowledge integration in workplace setting play an important role in developing competent health professional graduates. Reflective practice has been well documented as an effective learning tool in actively engaging in critical evaluation of a given clinical context. Learning is claimed to take place upon reflection with appropriate documentation. By thoughtful exercises about what you are doing and why you are doing transforms your capabilities into meaningful learning. Reflection constructs new meaning and knowledge is guided in practice and built upon. Various reflective models have been proposed to guide clinical practice. In order to promote the higher order cognitive skills, CREATE (Critical Reflective Reasoning Evaluation of Artifacts of Thoughtful Evidence) was designed. CREATE consist of reflective writing activity in an attempt to answer a set of guided reflective reasoning questions. The aim of this study was to evaluate CREATE a workplace-based assessment instrument designed to develop higher-order cognitive skills capabilities among health professional graduates.

Methodology:
A mixed method study design was performed to evaluate the workplace-based assessment instrument called CREATE. A total of 32 student participants and 4 clinical educators purposively sampled, consented to participate in this study from two physiotherapy schools. CREATE was evaluated for its effectiveness in measuring the higher order cognitive skills. CREATE was implemented during the students 4-weeks musculoskeletal clinical placement. Students practiced reflective reasoning with a set of structured higher level reflective questions. CREATE was utilized at two intervals throughout the clinical placement, that is at week 2 and week 4 of the placement. Qualitative data collection method through focus group discussion with student participants and an in-depth interview with the clinical educators (CEs) based on phenomenological study design was conducted. The participants live experience of using CREATE to develop clinical reasoning, critical thinking, and problem-solving skills were explored. The CEs’ role was as assessors who provided rating for the instrument. All qualitative data were thematically analyzed using Altas.ti software version 7). The psychometric evaluation that is internal consistency of CREATE instrument was performed using Cronbach alpha value to further strengthen the study findings.

Results:
The qualitative data analysis revealed highly favorable information pertaining to the use of CREATE during their 4-weeks clinical placement. The FGD generated several benefits of using CREATE during the 4-weeks musculoskeletal assessment. Two categories generated were: development of higher-order cognitive domains and CREATE stimulated prior knowledge. This two categories emerged to one theme: Increased attitudinal behavior towards competence. Meanwhile, the in-depth interview reported several advantages of using CREATE in clinical teaching among the CEs. Two categories namely quality teaching and higher order competence development emerged into one theme: increased attitudinal behavior towards competence development. The quantitative data analysis for CREATE showed high internal consistency with Cronbach alpha of 0.728 for the first case and 0.778 for the second case at significant level 0.01.

Discussion:
The findings from this study revealed positive outcomes of CREATE instrument as a potential workplace-based assessment instrument to develop higher-order cognitive skills among health professional graduates. A promising instrument to be considered by health professional educators in promoting higher-order cognitive skills, which is a crucial element of clinical competent behavior much desired by the 21s century healthcare industry.

References:

Ref: 007, Friday 13th July, 10.20-10.40am, C5
A phenomenological study of medical students’ perceptions of General Practice as a career, using socialisation theory.

H Alberti, K Reid
Newcastle University

Background:
The ageing population and push to community care has increased the workload of GPs. NHS England has promised 5000 more GPs by 2020/21 to tackle this; however, recruitment is in crisis with GP training posts. Studies have suggested that the denigration of GPs exists within medical schools, impacting on students’ career choices [1,2]. Little research, however, has explored the influence of medical school on its’ students’ perceptions of General Practice. The aim of this study was to explore medical students’ perceptions of General Practice and the influence of their experiences at medical school, in order to gain a deeper understanding of their career orientation in regards to General Practice.

Methodology:
An interpretivist, phenomenological approach was undertaken. Two focus groups of seven year one and seven year four medical students were conducted, audio recorded and transcribed. Qualitative data was thematically analysed. Ethical approval was granted.

Results:
Students perceived General Practice to lack prestige; viewing GPs as uncompetitive, less likely to succeed in their field and therefore not highly respected and undervalued, particularly in comparison with hospital doctors. Participants’ perceptions of the nature of the job and associated lifestyle of a GP lead to their perceptions of General Practice as a less challenging career choice than hospital medicine. When discussing the influence of medical school, participants often referred to implicit messages portrayed by the curriculum and medical school staff, and the impact that had on their perceptions of General Practice; the influence of the hidden curriculum [3]. Medical school was found to exert a strong influence through the hidden curriculum and students adopted their teachers’ values through a process of socialisation [4]. Students reacted negatively to any perceived pressures on them to become GPs. Participants viewed their clinical teachers as central to their clinical experiences: They referred to their clinical teachers in terms of role models that influenced their perceptions of GPs and the impact this could have on their future career choices.

Discussion:
Our phenomenological focus group study has revealed that medical students’ perceive General Practice to lack prestige and challenge. These perceptions come from a process of socialisation within medical school, whereby medical students internalise and adopt their role models’ perceptions and values, and the values portrayed by the hidden curriculum in their medical school culture. Perceived external pressures to pursue a career in General Practice can have negative implications, and medical schools should be made aware of this. Despite the small scale of this rigorous study, the findings have implications for medical schools, the Department of Health and Health Education England (HEE) in solving the “recruitment crisis”. Further research on a larger scale would be beneficial.

References:

Ref: 248, Wednesday 11th July, 3.20-3.40pm, C5
A randomized control trial monitoring undergraduate performance on presentation of patient history and examination findings following a pilot teaching programme

K S Arun, M Roshen
Whipps Cross University Hospital

Background:
The ability to present a patient’s history and examination findings is an essential skill for doctors of all specialties. All 33 UK medical schools employ an objective structured clinical examination (OSCE) as part of final year exams to assess students’ clinical presentation skills. Despite this, there is no single model framework for students in how to present patients’ clinical information within the medical curriculum. We evaluated the impact of a pilot teaching programme that focused around a single presentation framework: presenting a summary of clinical information as key positive and relevant negative findings.

Methodology:
A mixed methods study consisting of pre- and post- course questionnaires and a randomized control trial was performed with final year medical students. A pilot teaching programme training students how to identify and summarise key positive and relevant negative findings of a patient’s history and examination was delivered to 40 final year medical students. The programme involved pre-course reading, lectures, pre-recorded video ‘model answer’ presentations, simulation scenarios and post-course summary sheets. Students’ attitudes to the framework and pre- and post- course confidence levels were assessed. A mock OSCE to assess presentation skills was delivered one month after the course to 13 randomly selected students who attended, matched by 13 students who did not attend the course.

Results:
The pre-course questionnaire demonstrated that students from each medical school had been taught different presentation styles (range 2-6) rather than a single standard framework. Results from the pre- and post-course questionnaires demonstrated that of the 40 students who attended, 39 felt the course prepared them well for working as a FY1 (97.5%) and all found the course useful, enjoyable and would recommend the course to a colleague (100%). 12/40 students (30%) had no framework to presenting clinical findings prior to our course, but after the course all 40 students (100%) felt comfortable and confident using the taught framework. The course produced a statistically significant increase in the students’ confidence at presenting clinical findings (Mann-Whitney test, p<0.00001). A follow-up questionnaire one month after the course was completed by 34 students (85% completion rate), and all 34 students reported that they were still using and would continue to use the presentation framework taught. Results from the mock OSCE demonstrated that the students who attended our course scored similarly in terms of content (R2=0.745), but scored significantly better in terms of structure (p<0.05) and global impression (p<0.05).

Discussion:
Our teaching programme which summarised clinical information into key positive and relevant negative findings proved very effective at increasing medical students’ confidence and this confidence was maintained one month after the course. Students scored higher in structure of presentation and overall presentation one month following the teaching programme. Medical schools should provide standardised formal education on presenting patient history and examination findings. The benefits of summarising clinical information into key positive and relevant negative findings should not be underestimated.

Ref: 266, Wednesday 11th July, 3.40-4.00pm, C5
An Integrated Clinical Apprenticeship: Evaluation of a novel Longitudinal Integrated Clerkship at Imperial College
A McKeown, R Parekh, S Kumar
Department of Primary Care & Public Health, Imperial College

Background:
Delivering learner-centred education and authentic learning in a service orientated healthcare setting is a growing challenge in undergraduate curricula. The current model of medical education, with students as passive observers, is leading to an erosion in medical students’ empathy, leaving them demotivated and disengaged (1). This empathy decline has been linked with detrimental effects on patient outcomes (2). Alongside this, doctors of the future need to address the challenges of an ageing and complex patient population. This requires generalist doctors able to integrate care across medical specialities.

Longitudinal Integrated Clerkships (LICs) have been shown to prevent empathy erosion, whilst enabling authentic learning across healthcare settings (3). However, there remains a gap in the literature regarding the implementation and evaluation of LICs within the context of the UK National Health Service (NHS).

Imperial College present the results of a novel LIC, “The Integrated Clinical Apprenticeship” (ICA), with the aim of developing generalist thinking doctors of the future, through a model of authentic service learning.

24 volunteer year 5 medical students were placed in pairs, in a GP practice, every Thursday throughout their 5th year. In this setting, they accrued a caseload of patients with comorbidities matched to the year 5 curriculum. These patients were followed up by the student over the year across healthcare settings.

Methodology:
We aimed to explore:
1 The effect on students’ empathy, patient centredness, ability to manage ambiguity, resilience and workplace engagement
2 Students’ experience of the continuity of relationships with faculty, peers and patients alongside having an authentic role with patients
3 Are students’ exam scores affected by participating in the course

We used a mixed methods approach:
Quantitative data: Multiple validated Likert scale inventories: Jefferson Scale of Empathy, Physicians’ Reactions to Uncertainty, Patient-Practitioner Orientation, Risk Tolerance, Resilience and Psychological Empowerment at Work (4–8). Students were asked to complete the questionnaire pre and post the intervention. This was compared to two control groups from the same year: those who applied for the course but were not successful and those who had not applied.

Qualitative data: 2 focus groups of the ICA cohort were carried out at the end of the academic year. Students were able to describe their experiences of the course to trained facilitators.

Assessments: Written and clinical exam results were analysed using student T-tests between the comparison groups.

Results:
Analysis of the focus group data demonstrated 4 themes around the central concept of student navigation: navigating the patient journey, their professional development, their learning journey, and the healthcare system. Examination data showed no significant difference in exam scores between the groups.

Discussion:
This study has demonstrated how this model based on the principles of integration across specialties, allows students to develop a generalist and integrated approach in managing clinical complexity and uncertainty. The principle of continuity across a year, allowed students to develop meaningful relationships with faculty, patients and peers. These relationships provided the basis of mutual benefit through service learning: students becoming dedicated patient advocates, contributing to the care of their patients, alongside learning through an authentic experience. Students performed as well as their peers in assessments, and early quantitative results demonstrate that students had an improved ability to manage uncertainty.

This study is of interest for a national and international audience of medical educators who are developing longitudinal medical curricula and demonstrates the benefits and challenges of integrating an LIC within the NHS in the UK.


Ref: 383, Wednesday 11th July, 4.00-4.20pm, C5
An unorthodox service: Medical students in the UK learning and working interprofessionally to serve homeless people

E S Anderson, S Malcherczyk, L Bleazard, D Kinnair
University of Leicester

Background:
In the UK, homeless people often fail to access services and experience tri-morbidity of health problems.1,2 Project LIGHT (Leicester Initiative Good Health Team) is an interprofessional student staff partnership in which students work with the voluntary sector to offer health promotion to homeless people. Our evidence shows that homeless people may listen to students working with the voluntary sector.3 This project has a similar vision to service learning projects in North America and Canada, relating to student autonomy, leadership, project management and the ability to work and learn interprofessionally.4 Participating students can only volunteer for LIGHT after training. Medical students can access this in Special Study Modules (SSM) and alongside other students as an extra curricula activity. The learning covers, understanding homelessness and the law, physical and mental health including drug misuse, the management of difficult patients, first aid training and running health promotion activates. We continue to evaluate the impact of project LIGHT and share our on-going progress, challenges and solutions.

Methodology:
A mixed methods evaluation including students from 2013 - 2017. Students complete a pre-and post-course questionnaire with scored questions on their learning outcomes and free text comments on the value of learning. In addition, students write in a log book and a reflection about their experiences and learning. Some students have taken part in one-to-one interviews. The scored questions have been analysed using SPSS. The student free text comments and interviews have been analysed using thematic analysis. The log book and reflective writing pieces using content analysis.

Results:
To date 363 students have participated of which 265 are medical students (73%). Of the completed questionnaires, used during the teaching of the last 5 years for 171 students, 133 (77%) were returned and analysed. In 2017, 39 students delivered 21 health promotion sessions to 61 homeless people. The non-parametric Mann Whitney test shows positive learning for all the learning outcomes (P<0.01). The qualitative comments highlight a wealth of themes mirrored in the content analysis and include: i) knowledge, on the causes of homelessness, health, addiction, services, changing behaviour, ii) skills of communication, organisation, interprofessional perspectives, designing and running effective health promotion, and ii) attitudes, concerning stereotypes and vulnerability changed.

Discussion:
The LIGHT staff-student project positively impacts student learning and engages the university in wider community outreach, while challenging faculty to support and operationalise this work. Our evaluation of students outlines the value of learning experiences often not found in any other part of the curriculum. It highlights inequality and prepares students for working with vulnerable groups. The challenges of running extra curricula activities and maintaining the project as a charity outside of the medical school are being resolved through team work and seeking external support from voluntary sector organisations. We will share some of our practical solutions to many of the barriers encountered. We are going on to evaluate the impact on homeless people; anecdotal feedback is extremely positive.

References:

Ref: 398, Wednesday 11th July, 4.20-4.40pm, CS
Anatomy teaching with DICOM image viewer on iPad as an adjunct to medical students
M Swamy, S Ngu, S McCaughey
Newcastle University

Background:
Anatomy is one of the cornerstones of medicine. Medical students in their clinical training and subsequent practice will apply their anatomy knowledge in medical imaging. There has been a rapid increase in the number and complexity of radiological investigations being performed during all stages of patient care; therefore it is essential that our future doctors become familiar with these images in their early stages of training [1, 2]. Junior doctors and final year medical students have criticised the lack of radiology anatomy teaching in pre-clinical undergraduate years, leading to future uncertainty whilst on the ward and unable to interpret images, especially more complex images such as CT or MRI [3, 4]. Anatomy teaching via DICOM viewer (OsiriX) on iPads has the potential to encourage Phase I medical students to appreciate more arbitrary planes and help them to become familiar with identifying normal structures and interpreting clinical images. The study aimed to implement and investigate the role of DICOM viewer (OsiriX) on iPad as an adjunct to anatomy teaching.

Methodology:
Eighty-five first year medical students at Durham University were divided into eight groups. At the beginning of the session, students identified anatomical structures on a CT scan of the chest during pre-test using a questionnaire. Each group of students used two iPads (four-six students/iPad) and viewed CT scan images in different planes using OsiriX for about twenty minutes facilitated by a tutor. A post-test was conducted. Feedback was obtained at the end of the session. Data was analysed using paired t-test. Qualitative data from the free text comments was analysed using thematic analysis.

Results:
A significant increase in knowledge scores was observed in the post-test when compared to the pre-test (p<0.001). Majority of the students felt that the session was useful (73/85:86%), viewing images in different planes improved their anatomical knowledge (63/85:74%), the session improved their ability to recognise anatomical structures on CT scans (74/85:87%), the session was enjoyable (73/85:86%). Some of the themes that emerged from their feedback were application and consolidation of knowledge, clinical contextualisation, identified knowledge gaps, helped in focussing revision, improved recognition of structures and their relationships, team work and interactive session.

Discussion:
The study demonstrated a significant improvement in students’ ability to recognise anatomical structures on CT scans. Student feedback was generally very positive. They reported an increase in their confidence. DICOM viewer can be a useful adjunct to teach anatomy in a clinical context helping students to interpret clinical images whilst being cost-effective.

References:

Ref: 422, Wednesday 11th July, 4.40-5.00pm, C5
Backwards Learning for Forward Planning: A Model to Improve Medical Student Resilience
C Horn, J Rees, C Weston, M Rhydderch
Swansea University

Background:
Over 9 years, we have amassed an archive of about 3000 pieces of student reflective writings. These contain recurring themes concerning professional practice and personal issues, including worries about coping with stress and challenge, finding a good work-life balance, dealing with doubt and uncertainty and prioritising time. Recent GMC guidance recommended that students learn healthy ways to manage such problems (1).

Preparation for Clinical Practice (PCP) is a novel non-credit-bearing module designed for this purpose. It was developed in response to the unmet need evidenced in the reflective writings, and offered to first year students as a voluntary component of the course. It incorporates various educational resources or tools with facilitation by clinicians who have had personal experience of the challenges faced by medical students and doctors. The clinicians are encouraged to be non-threatening and non-judgemental, and to include humour as a strategy for introducing difficult, but common issues – such as self-care, failure to progress, making mistakes and managing risk.

Each session begins with a short videoed talk (e.g. TED Talk), intended to stimulate the students to consider problems from differing perspectives and to engage in debate. The inclusion of light-hearted clips promotes a more relaxed learning environment and serves as a reminder that enjoying life as a student and a doctor is important to personal wellbeing and the wellbeing of patients. Facilitators then demonstrate, through role-play, relevant situations – some based upon those described in the reflective writings – so as to allow students to imagine themselves in similar circumstances. Subsequently, during facilitated small group discussions the students are gently challenged to think about the implications of the case for their personal wellbeing and future practice, to fully consider all aspects of the problem and to anticipate their own responses and generate solutions.

Methodology:
Initial evaluation of PCP has been through invited completion by attendees of an online, anonymised, feedback survey.

Results:
Average attendance for this non-compulsory course is 77% of the year group (n=76). Feedback has been received from 84% of attendees. Students indicate that they have enjoyed the sessions. They also suggest that the sessions have improved their approach to self-care, have increased their confidence in their ability to cope with stressful times in the future and that they are more aware of the support available to them. They claim to be more confident that they will be able successfully to overcome similar challenges in the future, should they arise.

Discussion:
Through PCP, different stress-management or mental health prevention interventions are employed. Included is an element of psychoeducation, which has been shown to achieve a significant effect on some outcomes (2) whilst cognitive-behavioural approaches through group work are also adopted and have been shown to be effective in modifying anxiety, depression and stress compared alternative educational controls. (3)

If a student can become absorbed in some of the common difficulties faced by doctors and indeed students themselves, in a way that is tangible, they may become familiar with management strategies and then be better equipped when they inevitably face similar events in their own careers. With better prepared students and subsequently doctors, there is reduced risk of developing indicators of burnout (4) which may be characterised by decreased job satisfaction, a negative effect on productivity and reduced workforce retention (5).

References:

Ref: 243, Wednesday 11th July, 5.00-5.20pm, C5
Barriers to involving GP Speciality Trainees in the teaching of medical students in Primary Care: the perspectives of GP trainers

M Harrison, H Alberti
Newcastle University

Background:
Teaching is recognised as an effective way of consolidating learning (1) and is part of the RCGP curriculum for GP Speciality Trainees (GPSTs) (2). Furthermore, near peer teaching has been shown to be beneficial to both parties (4), and learning may be enhanced by having multiple learners at different stages of their career in one practice (‘vertical integration’) (4). Exposure of medical students to a wide variety of GP role models may also positively influence students’ intentions towards a career in General Practice (5), potentially helping the current GP recruitment crisis. However, recent studies suggest that, while GPSTs seem fairly keen to teach (4), they have limited opportunities to do so in Primary Care (6-7). It has been suggested that GP trainers may be more guarded than GPSTs about the latter undertaking additional teaching responsibilities (4,8). This study aims to explore the perceptions of GP trainers of the barriers to involving GPSTs in the teaching of medical students in Primary Care, with the hope that the results will help inform initiatives and interventions to promote increased GPST involvement in teaching in a Primary Care setting.

Methodology:
This study uses a qualitative approach and in keeping with the interpretivist research paradigm. GP trainers from three local regional GP training programmes (Northumbria, Durham and Tees Valley, Cumbria), which form part of Health Education North East, were invited to participate in focus groups. Focus groups were conducted using a semi-structured topic guide and were subsequently audio-recorded and transcribed verbatim. Thematic analysis of focus group content was conducted by MH, using an iterative approach to guide further focus group discussion. Formal ethical approval was granted by Newcastle University.

There is now collaboration with regional GP training programmes in Staffordshire and Shropshire, and Manchester, in order to make this study a multi-site project. Further focus groups are to be carried out in early 2018 for GP trainers in these areas, with subsequent analysis to be carried out in an iterative manner as specified previously.

Results:
Three focus groups, recruiting in total 24 GP trainers from Northumbria, Durham and Tees Valley, and Cumbria regional GP training programmes, have been carried out so far. Thematic analysis of the content of these focus groups has identified five emerging themes: practical barriers, e.g. no medical students at the practice; teaching methods in Primary Care e.g. formal nature of teaching in Primary Care; fears, e.g. concerns regarding the clinical ability of the trainee; competing priorities, e.g. dominance of summative RCGP assessments; culture, e.g. teaching viewed as an extraneous part of GP training. Final analysis including the remaining two focus groups is expected to be completed by Spring 2018.

Discussion:
Teaching is considered by GP trainers to be of low priority compared to competing clinical and educational needs of trainees. GP trainers cite the dominance of e-portfolio requirements and summative RCGP assessments as further barriers to involvement of GPSTs in teaching activities. GP trainers also appear to worry about the ability of trainees to deliver effective teaching. Teaching appears to be currently viewed as an extraneous rather than an integral part of GP training, and is not considered to be ‘the norm’. Efforts to promote a shift in culture in which the role of GPST as teacher is normalized, may help promote increased teaching by GPSTs in Primary Care. These efforts might include: further development of the GPST teaching fellow role, staff development for GP trainers on how to facilitate GPST teaching in their practice, and other local initiatives to encourage GPSTs to teach. Providing training to GPSTs on ‘how to teach’ may also help relieve trainer anxiety regarding the ability of GPSTs to deliver effective teaching.

References:
Conflicting views that hinders theatre learning. A study exploring the perceptions and expectations of surgeons and medical students.
D Hunukumbure, R Chitkara, S Das
Imperial College London

Background:
Teaching and learning in the operating theatre is a well-established practice for medical students(1). This is considered to be an integral component of training amongst many surgeons(2). However, anecdotal evidence suggests that modern students feel differently. This study investigates the perceptions and expectations of both surgeons and medical students with the aim of maximising teaching and learning in the operating theatre. The study description and initial results of were presented at AMEE in 2017(3) and here we present further in-depth analysis, elaborating the conflicting views of the two main stakeholders that hinder theatre learning.

Methodology:
Both qualitative and quantitative methods were used to gather data. Semi-structured interviews were conducted with 11 medical students (four third years and seven final years) and seven surgeons. The data was analysed using a thematic analytical approach, comparing and contrasting between the surgeons and students. A questionnaire was given to all volunteer students attached to Hillingdon Hospital during the study period (January-February 2017). Ethical approval was obtained (MEEC1617-15).

Results:
The majority of students were dissatisfied with their learning experience in theatre. Many factors were identified, ranging from unfamiliarity of theatre culture, a lack of awareness of opportunities, lack of background knowledge of the conditions or patients, to a lack of recognition when learning has actually occurred. Equally surgeons were faced with many practical challenges, hindering their satisfaction as a teacher. Despite these challenges, many attempt to cater for the students’ needs. We identified a number of conflicting views between the surgeons and the students that hinder teaching and learning, such as the role of questions and answers during an operation. Many surgeons expected their students to ask questions from them while the students were reluctant to do so for multiple reasons. Surgeons questioned the students as a method of engaging with the students, to establish the level of their knowledge and as a method of teaching. On the other hand, persistent questioning had a negative impact on some students. We will also elaborate on ‘inner conflicts’ of surgeons and on students’ reflections in the presentation.

Discussion:
The overarching theme was the lack of awareness of students into many aspects of theatre learning and the surgeons’ lack of awareness into students’ experience and expectations. According to our findings, both the surgeons and the medical students could play an enormous role in optimising the students’ learning in theatre. We would like to elaborate our recommendations for the benefit of a wider audience. Some of these include a formal induction process, highlighting cultural challenges created by the theatre environment, expectations of the surgeons and available learning opportunities in theatre beyond the leading surgeon, a stepwise guide or a mobile app for the students and a ‘student corner’ in the theatre. The medical school can also play a role by facilitating feedback and providing more guidance to both the students and the surgeons

References:
(3) Hunukumbure D, Chitkara R, Jubber A, Das S. How to maximise learning in theatre? Bridging the gap between the students’ demands and the surgeons’ expectations. AMEE Abstract book 2017: #7R4
Delivering global health teaching: evaluating student experiences of a global health option ten years since conception
T A Deivanayagam, R Walker
Newcastle University

Background:
The GMC’s Outcomes for Graduates expresses that students should be able to “discuss basic principles of health improvement, including the wider determinants of health, health inequalities, health risks and disease surveillance” (1). In an increasingly globalised world, there is a need for doctors to have the right knowledge, skills and attitude to face new challenges in global health. The desire for medical students to learn about global health is well documented (2). Global health education can be categorised into compulsory teaching, optional teaching and pre-elective training (3). UK universities deliver this content using a variety of methods (4). In 2007, Newcastle University developed an optional student selected component (SSC) on global health (5). All fourth year medical students at Newcastle University complete 3 SSCs, each lasting 6 weeks. Stakeholders were consulted to develop the content of the SSC and it has been running successfully with increasing demand from students since 2007, with over 20 students taking part in 2017 compared to 6 students initially. As global health priorities have changed over the last ten years (6), we aim to conduct quality improvement on the content of this global health option using feedback from students undertaking the SSC in February 2018. In addition, the upcoming reform of the medical curriculum at Newcastle brings the opportunity to perform a qualitative evidence-based assessment in preparation for the proposed changes in length and time of delivery of SSCs in the future.

Methodology:
Feedback will be gathered on three main aspects of delivering global health teaching; relevance of content, structure of the timetable and the quality of methods of delivery. Data will be collected using a questionnaire before and after the SSC and a focus group with semi-structured qualitative questions at the midpoint and end of the SSC. Short written feedback will be requested after each session. The pre-SSC questionnaire will highlight gaps in knowledge prior to the SSC, which will contribute to assessing relevance of content. The semi-structured interviews at midpoint will gather information on the structure of the timetable. Evaluation forms at the end of each session will address both quality of methods of delivery and relevance of content. The post-SSC focus group and evaluation will address all aspects we aim to cover. All data will undergo thematic analysis using an open coding approach.

Results:
At present, the 6-week SSC contains one theme per week. The themes include global disease burden (mainly HIV, malaria and TB), chronic disease and health beliefs, war and conflict, maternal and child health, health partnerships and working overseas, and water supply and sanitation. Ten years on, we expect student feedback on the content of weekly themes to change reflecting reform in global health priorities. We particularly expect students to engage with a difference in the approach to global health action; from categorising issues by topic to holistic health systems strengthening (6). In terms of structure of the timetable, we expect positive feedback on the increase in the number of guest speakers delivering teaching. This year, there are more seminars compared to lectures than ever before, and feedback on this will help assess methods of delivery. The SSC takes place in February and March 2018, as such the study’s results will be presented at ASME 2018.

Discussion:
First, there will be sufficient data to effectively implement a 4-week long SSC in the coming years, which will be delivered to third year medical students as part of the new curriculum. Second, we will obtain data regarding themes that require updating according to changing global health priorities. Since the creation of the sustainable development goals in 2015 and international consensus to improve global health horizontally through systems instead of vertically through silos (6), we foresee student feedback on SSC content to mirror this shift.

References:
Does remote utilisation of simulation resources enhance student learning experience?
J Ellis, H Fuller, C James, J Leaman, S Kenyon, C Weegenaar, J Morgan
North Bristol Academy, Southmead Hospital. Bristol

Background:
Simulation is an effective tool in medical education which is highly valued by students, creating benefits in terms of both technical and non-technical skills acquisition (1).
However as a teaching tool it is demanding in terms of both resources and faculty (2,3). This problem is particularly highlighted by an academy based medical education system, where there is large discrepancy between the amounts of simulation teaching each student receives based on the local resources available. Where such resources are not available, teachers may be limited to classroom based teaching, for example case based teaching. This is particularly frustrating when simulation resources exist nearby, but too far for the students to travel.
We propose a teaching intervention combining these two modalities, utilising off site simulation facilities linked to the students in an attempt to navigate the problems of unequal resource distribution. We propose using two-way audio visual equipment to do this, thereby using simple technology to connect students to remote resources. Whilst the students will not be participating in a traditional simulation, our belief is that this teaching technique will allow exposure to simulation resources students would otherwise be denied.
Furthermore we suggest that students will benefit more from working through a case based teaching scenario enhanced with simulation resources, than can be offered by the traditional classroom based equivalent.

Methodology:
We propose delivering teaching to fifth year medical students on one patient scenario in two different formats, where each student will be randomly assigned to either style.
Our intervention group will receive teaching delivered via a cross-site simulation programme whereby the student decision makers act remotely from the scenario itself. The scenario will be executed at one site using expert actors in the roles of clinical staff. The students and facilitators will be located at a separate site, linked with two-way audio-visual technology to allow interaction in real time between these two groups.
This is will be compared to a control group whereby the students will receive a traditional case based discussion of the same “patient” scenario run by a facilitator.
Ethics approval has been submitted but is pending at this time.

Results:
We will survey students before and after the teaching sessions to establish their perception of knowledge gained and change in confidence levels with regards to management of this patient scenario. In addition we will use a pre and post session tests to objectively assess change in knowledge gained allowing comparison between the two teaching technique. We will also ask the students to self-assess the different sessions for their ability to develop non-technical skills.

Discussion:
If successful this model could provide a different mechanism of delivering case based teaching, perhaps enhancing its ability to teach both technical and non-technical skills. Additionally this may provide a mechanism for overcoming the barrier of access to a simulation suite for students in resource limited areas.

References:
Does the introduction of in situ prescribing exercises as part of a Child Health in Practice programme improve the competence of paediatric prescribing in medical students?

C Deakin
Nottingham University Hospitals NHS Trust

Background:
Prescribing errors are a common problem throughout the NHS with recent studies reporting an average of 8.9% of prescriptions having some error in adult medicine and paediatrics being felt to closely mirror this. Junior doctors are largely recognised as one of the groups at greatest risk of making prescribing errors due to limited experience and they report low preparedness in prescribing. Prescribing errors are of particular concern in paediatrics where small errors in dosing can produce potentially lethal effects and doses change frequently. Fourth year medical students in Nottingham spend eight weeks in paediatric medicine but report low levels of confidence in prescribing for paediatric patients.

This project aimed to see if the introduction of a one week Child Health in Practice (CHIP) programme, where students are attached to an FY1 doctor on the paediatric wards and are asked to complete everyday tasks alongside them, including prescribing in pre-prepared simulated drug charts, as part of their attachment would improve their prescribing skills in paediatrics.

Methodology:
During their paediatric attachment each student in a rotation was timetabled one week to shadow an FY1 in paediatrics and asked to complete some of the tasks an FY1 would be asked to complete in a work booklet, including prescribing practice in simulated drug charts on which they received feedback. The students were then set a series of prescribing exercises designed by paediatric and pharmacy instructors based at Nottingham Children’s Hospital. One mark was given for every correct point on the prescription chart based on a mark scheme based on a perfect prescription. The following cohort of students was then given the same prescribing exercise having had only the pre-existing therapeutic teaching sessions. The prescribing exercises were marked against the approved mark scheme and a percentage score calculated for each candidate. The mean score in the intervention and control groups were then compared using independent t-tests.

Results:
The score of the two groups (CHIP n=34, control n=22) were calculated as percentages and the mean difference in score calculated and analysed via independent t-test. The mean scores were 76.903% and 62.233% respectively for the CHIP group and control group the mean difference being 14.67% (CI 95% 9.378-19.963, p-value 0.000).

Discussion:
This project found a statistically significant improvement on performance in prescribing practice test between students completing a Child Health in Practice programme as part of their Child Heath module compared to those who did not. This is a strong argument for continuing the programme within the University of Nottingham and for consideration in other specialties although small sample sizes may limit the reliability of statistical significance. Despite this, initial data appears to support the use of a CHIP programme to improve prescribing. Further projects to obtain further data across sites and specialities are currently being considered along with an extension of this project to determine whether this improvement in prescribing is sustained during therapeutics exams.

References:
Evaluation of a novel longitudinal clinical placement in the MBBS programme, Newcastle University
S Jandial, S Bussey, T Sandford, R Frearson
Great North Children's Hospital, Newcastle upon Tyne

Background:
Within the MBBS programme at Newcastle Medical School, semester 1 of the fourth year has traditionally been classroom-based, focussed on the knowledge and skills required for requesting clinical investigations and prescribing. Whilst important for consolidation of core knowledge for the student, there has been a concern that clinical skills, and contextual learning, may suffer during this period. In light of this, and in anticipation of the new curriculum currently being implemented, a new longitudinal clinical placement was offered to 4th year students in the academic years 2016/17 (year 1) and 2017/18 (year 2). The longitudinal nature of this placement differed to current student-selected components which take the form of immersive teaching blocks and is thought to help with educational continuity [1]. The aim of this evaluation, therefore, was to understand the longitudinal experience from both student and supervisor perspectives.

Methodology:
All 4th year students were offered an additional clinical placement, on top of timetabled sessions, at induction. Participation was voluntary, for either morning or afternoon sessions. Supervisors were recruited from 2 local teaching hospitals across a wide range of specialities. Data was collected at baseline and completion in both academic years in the form of questionnaires relating to expectations, clinical confidence (students) and the overall experience. Qualitative data was collected by focus groups with students (year 1) and supervisors (year 2). As an audit and evaluation of curriculum review, ethical approval was not deemed necessary.

Results:
Students participation increased between year 1 (39/325, 12%) and year 2 (50/301, 17%). Students rated the placement highly, and would recommend this to their peers (year 1 38/39, 97%, year 3 47/50, 94%). Placements included core specialties such as medicine and general surgery, alongside laboratory, community and sub-specialty placements. Student-reported clinical experience was diverse including outpatient clinics, operating theatres, attending special schools and participation at post-mortems.
Themes arising from focus groups included the importance of preparation; students would have liked more formal learning objectives and their clinical placement to provide clinical context to their concurrent classroom-based learning. Similarly, supervisors recognised the importance of understanding the student’s requirements and goals, to enable them to tailor the clinical experience appropriately. The brevity of the placement compared to traditional clinical rotations was raised as both a positive and negative by supervisors; it was less onerous on the supervisor and allowed them to focus teaching on a particular session but the disjointed nature meant they did not form the same relationship as they would in a more immersive experience.

Discussion:
We have shown that a longitudinal clinical placement is both feasible, and acceptable to students and supervisors. Preparation for both students and supervisors will be key to future longitudinal placements and will inform curriculum changes. Limitations to this evaluation include the voluntary nature of the project, and small numbers of students involved. However the increase in participation between year 1 and 2, and high recommendation, are seen as positive. Once longitudinal placements are core to the curriculum, further evaluation will be necessary including a specific focus on the preparation of both students and supervisors.

References:

Ref: 193, Wednesday 11th July, 4.40-5.00pm, C9
Experience and role models: How medical students describe influences on specialty preference
B Burford, H Alberti, D Kennedy
Newcastle University

Background:
Pressures on recruitment to some medical specialties have been increasing, and there are now concerns about gaps in training programmes in specialties which were once easily filled. Interest in the factors which influence medical students and junior doctors’ choice of careers is therefore growing. Recent literature shows that experiences of specialties in clinical practice in later stages of medical school, and during postgraduate training, can be important, but that personal, domestic and lifestyle factors may in fact have a greater role than clinical aspects in an eventual decision [1, 2]. However, the role of early experience during medical school should not be ignored. Quantitative data from our research has found that the expressed interest in different specialties changes in the early years of medical school [3]. Here we will present preliminary analysis of interview data exploring why preferences emerge and change. We have considered the accounts given by medical students in their first two years of study, and considered what sort of experiences shape their expectations, and their preferences, for career specialisation.

Methodology:
Qualitative interviews have been carried out with medical students annually since their first year of a five year programme. This paper will describe analysis of interviews in their first two years, in which their exposure to medical specialties was limited to university-based teaching, and day visits to hospitals and general practice with some patient contact.
This analysis is based on 33 interviews: 14 in October of Year 1, 10 in May of Year 1, 9 in May of Year 2. The project is ongoing.

Results:
Transcripts were first coded in order to identify sections relating to topics including long-term thoughts on medical careers, references to specific specialties, comparisons between specialties, and clinical experience relating to specialty choice.
Analysis to develop themes within this dataset is ongoing. Initial observations are that a number of factors influence students’ preferences, including experience before medical school, early patient contact in medical school, formal teaching and informal role modelling by clinical teachers. Key points are:
• Some students know very little about the potential range of medical careers on entering medical school. Some bring knowledge from home or work experience, but this is limited.
• Participants do not have career plans in these early years. While some have preferences for broad areas (GP or hospital, medicine or surgery), all are aware their views may change during medical school.
• Teaching can open students’ eyes to areas of medicine they have not previously considered or been aware of. Lectures are an effective way of introducing new specialties, if lecturers are enthusiastic and engaging.
• Practical, ‘hands on’, opportunities in general practice visits can make GP more appealing than hospital specialties where early patient contact may be more limited. Role modelling and encouragement by GPs is important. The breadth of cases seen by GPs is a surprise to some.
• Personal factors, particularly the desire to have a family life, may conflict with the duration and intensity of training. This may be more of an issue for women, and mature students.

Discussion:
Medical students’ awareness of and attitudes towards career paths is mutable in the early years of medical school. While some may come with preferences – positive or negative – for many the opportunity to find out about potential opportunities is an important element of the first phase of study. Role modelling, and the ways in which clinical opportunities in clinical visits are provided, are an important part of this, but lecture-based sessions also provide a ‘shop window’ into clinical specialties. Faculty should be aware not just of the direct pedagogical impact of their teaching in terms of the formal curriculum, but also how their approach and holistic presentation of a specialty may form early impressions.

References:
Exploring Medical Students’ Perceptions of Communication with Cognitively Impaired Adults
E Shaw, J Fisher
Northumbria Healthcare NHS Trust

Background:
In light of the UK’s aging population and the increasing prevalence of dementias, being able to communicate with patients with a spectrum of cognitive impairment is increasingly important1. Effective communication with a person with cognitive impairment is an essential skill required for Comprehensive Geriatric Assessment, yet health professionals often find such communication challenging and stressful2. Various barriers to good training in this field are recognised, including personal, historical and institutional factors3. The label “poor historian” is sometimes employed by medical professionals when referring to older, cognitively impaired patients in hospital - the implication being that the patient’s description of their symptoms and medical problems is sub-optimal4. It is essential that medical students learn to apply a different approach to these situations, where they instead strive to ‘diagnose’ the communication difficulty5. The aim of this project is to understand why medical students find communicating with people who are cognitively impaired challenging, in order to inform future training initiatives.

Methodology:
Approval was granted by Northumbria Healthcare’s Research and Development department and Newcastle University’s Research Management Group. The project consists of three different components that will enable exploration of the phenomenon of interest from the perspective of 3rd and 5th year medical students, as well as enabling us to understand its place within the curriculum, both real and hidden.

Firstly, we designed a novel teaching session on communication with cognitively impaired adults for 5th year Newcastle University medical students doing their Hospital Based Practice rotation at Northumbria base unit. The session will run three times between January and March 2018, with 14 students each time. Small groups of students will rotate around three different stations: taking a history from a patient with cognitive impairment (played by a professional actor); taking a collateral history; and an exploration of the term “poor historian” using pre-recorded video footage of patient interactions. Beforehand, students will be asked to write down words/phrases they associate with being asked to take a history from a patient with cognitive impairment. They will record these on A0 paper using pens of the same colour and will then share this with the group. Following the completion of the stations, students will return to their paper and will be invited to change, remove or add words (if their views have changed) – crucially, they will do so in a different colour. The words they use, and how they change, will be analysed using content analysis.

Secondly, we will survey all third year medical students on completion of their Foundations of Clinical Practice (FoCP) rotation. The survey will explore their attitudes towards communication with cognitively impaired adults and their experiences of learning in this area during FoCP. This will provide quantitative and qualitative data.

The third aspect involves a structured review of the university’s teaching on communication with cognitively impaired adults, from planned to unplanned teaching, and any appearance in assessment. In addition, we will conduct a poll of different hospitals across the university base units to explore how they select inpatients for participation in 3rd year teaching. This review will be contrasted with the students’ experiences as revealed by the survey.

Results:
The results of the project are not yet available as the teaching sessions have yet to take place. Analysis of data obtained from part two is on-going, as is the curricular review. Analysis will be complete by the end of March 2018.

Discussion:
Our findings will be framed in the context of the local training experience and we hope that our work will inform a deeper understanding of medical students’ perceptions in this area, with the ultimate aim being to refine future training initiatives.

References:
Exploring the phenomena of empathy erosion in UK medical students: A study comparing empathy in students on an apprenticeship in primary care and those on a traditional hospital attachment.
S Tanna, S Kumar
Imperial College London

Background:
The NHS is currently facing difficult times. Training posts in parts of the UK remain unfilled (1), and many doctors are leaving the profession altogether. This comes at a time where healthcare demands of our ageing population are rising exponentially, resulting in a health service that is heavily overstretched. Unsurprisingly this is having a negative effect on doctors in terms of their own well-being which can impact negatively on health outcomes of their patients and retention within the profession.
Medical student burnout is also a real and rising global problem (2). This has been linked to decline in empathy which is a well-known phenomenon that occurs during medical school, mainly in the clinical years (3). Factors contributing to this empathy ‘erosion’ are unsuitable learning environments, low sense of well-being, fragmented patient relationships, vulnerability, poor role-modelling, lack of support, mistreatment from seniors and high work load (4).

It has been suggested that developing a strong professional identity and improved empathy to some extent can alleviate burnout (5,6). The literature on longitudinal clerkships suggests that educational continuity can ‘protect’ against the empathy decline (7) that occurs during medical school but there is limited evidence of this finding at present in the UK.

This aim of this study was to explore the impact of two different clinical placements on student empathy and explore the possible causal factors that may act to influence medical student empathy. The interventional placement was a self-selected novel ten week apprenticeship in primary care which replaced one traditional ten week medicine placement in hospital.

Methodology:
Medical students were surveyed at the beginning and end of their 3rd year (first clinical year) using the Jefferson Scale of Physician Empathy- Student Version (n 149 and 172 respectively). The data were analysed using paired T tests.

Data was collected through two separate focus groups with students undertaking the pilot apprenticeship, which were led by an independent researcher. This data was thematically analysed by three reviewers.

Results:
Students undertaking the primary care apprenticeship demonstrated a preservation of empathy scores with no significant decline observed (p= 0.18) compared with a significant decline seen in empathy scores for students undertaking the traditional hospital attachment (p = 0.0051).
Focus groups further revealed possible factors that lie behind this finding of empathy protection whilst on a prolonged apprenticeship in primary care: 1) positively enhanced development of professional identity through better role modelling; allowing more autonomy; developing better relationships with patients and tutors; and through development of real compassion and empathy towards patients; 2) created better learning environments due to greater clinical exposure; focused small group teaching and having more meaningful roles in the team; 3) promoted the importance of teamwork via better understanding of healthcare infrastructures.

Discussion:
This study is one of the first in the UK to add to the literature base exploring medical student empathy erosion. It has shown some early indications that prolonged and early exposure to primary care could protect empathy from declining in medical students.

We also identified possible reasons behind this effect of empathy protection observed such as an enhancement of professional identity, more supportive and nurturing clinical learning environments and having a valuable role in the team.

Doctor and student burn out are very real and important issues that need urgently addressing, as the UK health service continues to stretch to breaking point. This study presents some early findings that early educational continuity in the medical curriculum can positively enhance student’s professional sense of self and empathy, both of which may protect them and their patients by promoting professional well-being.

References:
1. Rimmer A. Foundation programme will have unfilled places this year. BMJ 2017; 356
2. Glauser W. Medical schools addressing student anxiety, burnout and depression. CMAJ 2017; 189(50)
7. Benbassat J, Baumal R. What is empathy and how can it be promoted during clinical clerkships. Acad Med 2004;79

Ref. 355, Thursday 12th July, 2.20-2.40pm, C5
Googling is core and the textbook is extra: Information-seeking behaviour of first year medical students in an age of information overload

T Bird, S Whittaker
University of Leicester Medical School

Background:
In the new curriculum at Leicester Medical School 2016, medical students are expected to find much of the information on which they base their knowledge independently. Students actively learn in groups, working on iPads to solve case study questions. The ability to discover and evaluate information (information literacy) is recognised by Jisc as one of the seven elements of Digital Literacy ‘which fit an individual for living, learning and working in a digital society’ (1). Medical students and their future patients inhabit an ever-changing information-rich environment, where information overload can create uncertainty (2). Students’ information-seeking habits will influence not only their studying and exam success but also their future practice. The project aims to discover how medical students find and evaluate information in group active learning work, addressing questions such as what sources they use, how they choose sources and evaluate information, their self-efficacy, and whether and where they experience uncertainties or problems. Research consists of focus groups with first year medical students, and separately with the junior doctor Clinical Teaching Fellows as well as small group session observations. The intended outcome is an understanding of how medical students approach finding information within the new curriculum, so that the library can support students more effectively in terms of resources provided, and work together with the Medical School to develop students’ information and digital literacy. Findings will contribute to the wider discussion of how students may best learn in the age of mobile learning and information overload.

Methodology:
The research comprised 1) first-hand observations of first year small group sessions to see firsthand how students search online and choose sources to answer group work questions, 2) focus groups with first year medical students 3) focus groups with the Clinical Teaching Fellows over two academic years. The focus group data was analysed using NVIVO to discover emerging themes and patterns.

Results:
To help them answer questions in group work, students favoured first their lecture slides, then websites such as Wikipedia, Patient.co.uk, WebMD, NHS websites and others. Students prefer these websites as they are familiar and they display information clearly on screen. Students are aware that information should corroborated and may leverage the group to check information soundness, or may take a pragmatic “good enough” approach given time constraints of the task. Students sometimes feel insecure that they cannot be sure about “right answers.” Their self-efficacy improves as they come to understand the tension of there not always being a “correct” answer

Discussion:
The learning design of the group work task was considered, and it was noted that students do use textbooks both physical and online ebooks, but not often for this group work task as they are seen as “not quick enough.” Emerging recommendations include: 1) encouraging students through training and materials to use handy online tools provided by the library such as ClinicalKey, and 2) ensuring group work questions include more “why” questions as well as questions which introduce a physiological change in order to help students imagine what resulting changes happen in the bodily system, to develop diagnostic reasoning.

References:

Ref: 374, Thursday 12th July, 2.00-2.20pm, C5
Improving final year medical students’ knowledge in, and confidence of, patient safety incidents
R Crook, I-A Tribe, N Mathews
Chelsea and Westminster NHS Foundation Trust

Background:
Undergraduate patient safety education typically focuses on ethical quandaries and human factors. Whilst these are worthy principles it leaves a gap in knowledge regarding the practicalities of reporting incidents, basic governance surrounding serious incidents (SI) and what happens if you are an involved in an SI as a junior doctor. This contributes to the fear surrounding SIs, the poor submission rates of incidents by doctors and ultimately detracts from a patient safety culture (1). This project aimed to increase knowledge of patient safety incidents and confidence in dealing with one in the early years of a medical career.

Methodology:
This project used qualitative improvement methods to achieve its aims. This began with an initial survey of final year medical students to determine their knowledge of incident reporting and serious incidents (using MCQs), as well as how prepared they would feel if they were involved with an SI in their early career (using 1-10 scales). An interactive tutorial was then delivered in which the students and instructor discussed the practicalities of why incident reporting occurs, who can report an incident, what happens if you are involved in an incident and sources of support. Students were able to practice their knowledge using anonymised examples of patient safety incidents. A post-tutorial survey was given to track changes in the students’ knowledge and confidence after the intervention. The tutorial was then changed based on student recommendations to include more cases and an example of a Datix submission form. Comparisons were made between the post-tutorial surveys after this additional intention.

Results:
Pre- and post-tutorial surveys were completed by 29 students. Of this group all had “heard of” incident reporting, 2 had been involved in an incident and 3 had received prior teaching on serious incidents.
After intervention 1 (the tutorial) the number of students using the word “Datix” when describing how to report a patient safety incident improved from 78% to 100%. The number of correct answers to who can report an incident remained unchanged from 94%. The number of correct responses to why incidents are reported moved from 38% to 54%. The ability of students to correctly identify SIs from non-serious incidents improved from 54% to 71%.
After intervention 1, students’ confidence in reporting incidents improved from 3.25 to 7.81. Students’ preparedness in dealing with an SI as an FY1 improved from 3.25 to 7.18. Overall value of the session was 8.07.
After intervention 1 and 2 (tutorial plus addition resources) the number of students using the word “Datix” when describing how to report a patient safety incident improved from 75% to 100%. The number of correct answers to who can report an incident moved from 100% to 92%. The number of correct responses to why incidents are reported improved from 23% to 85%. The ability of students to correctly identify SIs from non-serious incidents improved from 46% to 77%.
After intervention 1 and 2 student’s confidence in reporting an incident moved from 3.77 to 8.08. Students’ preparedness in dealing with an SI as an FY1 improved from 2.85 to 7.15.

Discussion:
Intervention one was highly effective in increasing knowledge in how to report an incident and how to differentiate between SIs and non-serious incidents. The tutorial was also effective in increasing student preparedness for dealing with an SI as an FY1. Further efforts to improve this project would be to potentially introduce simulation into the teaching and allow time for students to complete a Datix form themselves, this is based on student feedback.

References:

Ref: 418, Thursday 12th July, 2.40-3.00pm, C5
Innovating Undergraduate Pathology Education through the Public Engagement Model
N M Nagesh, B C Giurca, S Lishman
Exeter Medical School

Background:
The trends in modern undergraduate medical education focus on a patient centred approach through problem based learning over the traditional modular curriculum.1 Integrating pathology into this style of learning has resulted in the dilution of core scientific principles which may have contributed to reduced understanding and interest in the subject.2 We aim to innovate pathology education by utilising National Pathology Week which is organised by the Royal College of Pathologists to develop the public engagement model which empowers students to learn pathology by teaching the public.3 Through this model, we hope to generate greater interest in pathology at both undergraduate and postgraduate stages of education.

Methodology:
We obtained funding from the Royal College of Pathologists to organise National Pathology Week in 2016 and 2017 at Exeter Medical School and the Royal Devon & Exeter Hospital. We involved 255 undergraduate student volunteers from health-related courses to participate in information stands, deliver sessions in schools and engage with public. We designed a curriculum aiming to educate both students and public on current topics such as cancer screening programmes, antibiotic resistance, diagnosis of inflammatory bowel disease and the roles of pathologists. We hosted 28 pathologists, biomedical scientists and microbiologists to engage with students, share experiences and offer an insight into their careers. Students and pathologists completed formal online surveys before and after the event. Students from the 2016 cohort were followed up after one year after to assess knowledge retention and future aspirations.

Results:
Through this project we interacted with over 1000 members of the public and 300 local school students. The medical student volunteers developed a range of skills including competent use of microscopes to visualise pathology slides, effective communication with lay audiences to teach pathology and understanding of the clinical application of pathology. Students gained knowledge in basic biomedical sciences relating to pathology including histopathology, haematology, microbiology and increased their awareness of roles of pathologists. Both students and pathologists involved rated the public engagement model as “very good” and have observed a number of improvements between 2016 and 2017. The majority of pathologists involved were very interested in becoming formal tutors for students using this model for future events. At the one year follow up, the 2016 cohort reported retention in both skills and knowledge gained from the event. Students were also inspired to apply for research projects, pathology placements and attended conferences.

Discussion:
We believe the public engagement model of teaching undergraduate students has the potential to develop a greater interest in pathology whilst benefitting the wider community. The model has been developed using the adult learning theory principles of “Andragogy” focusing on learning outcomes that affect everyday life, whilst using a problem based approach.4 Implementation of this model into the modern curriculum can be done through Student Selected Components (SSC), workshops and through student led societies.5 Students could complete an extended length essay to support their public engagement activities and consolidate knowledge and skills developed through this exercise. This model can also assist speciality training pathologists and allied healthcare professionals in pathology to develop their education portfolios through mentoring students through this model. It must be noted that the public engagement model has been designed to aid the teaching of pathology. The model is currently in its infancy and it cannot replace or dilute the existing undergraduate pathology curriculum. This model is currently being assessed by Exeter Medical School for the development of a pathology themed SSC.

References:

Ref: 246, Thursday 12th July, 3.00-3.20pm, CS
Investigating the effectiveness of simulation to prepare medical students for professional practice: A mixed methods study
C Carpenter, E Brewster, G Vince
Lancaster University

Background:
Recent studies have shown that medical students still do not feel prepared to practice as a doctor once they graduate(1-3), despite multiple reforms in medical education over the last decade. Preparedness is vital to ensure patients are getting the best, safest care, and for the well-being of junior doctors to avoid stress, anxiety and burnout which is so prevalent among the medical profession(4). In this digital era, there has been a rise in use of technology in medical education, notably the use of simulation technologies. Simulation in medicine is any scenario using mannequins or actors instead of patients to teach how to manage conditions or practice procedures. The evidence for simulation is clear across postgraduate and continuing professional education(5, 6), and is now being increasingly used in the undergraduate domain. This study seeks to examine whether simulation is an effective educational methodology to prepare final year medical students for professional practice.

Methodology:
This mixed methods, two phase study, undertaken over two academic years aims to determine what style of simulation is most effective to prepare medical students for practice as a doctor. This will take a longitudinal format, gathering data from 3 participant groups; final year medical students, supervisors of final year students (and when they become doctors) and key stakeholders. The compares a ‘Ward simulation’ format in which students make their way around a simulated ward dealing with the problems and patients they encounter with a ‘Bleep simulation’ in which medical students will be given a pager (known as a ‘bleep’) and must respond to pages (‘bleeps’) about different aspects of patient care. The courses are both designed not only to develop knowledge but also non-technical skills such as prioritisation and time management which are essential for a competent doctor. Data will be collected via questionnaires, focus groups and interviews at two phases; Phase one, immediately after the simulation course, and phase two, 3-4 months into the student participants first job as a foundation doctor. Phase one is complete, and phase 2 of year 1 has commenced.

Results:
23 student participants were recruited for phase 1, with 23 completed questionnaires and 2 completed interviews. Three stakeholders have been recruited and interviewed to date. Students feel competent with basic core competencies and skills and overall 74% of students felt prepared for their foundation jobs. 91% of students felt that simulation had prepared them well for working as a doctor, however participants still felt stressed (74%) and anxious (86%) at the prospect of starting work. Issues of most concern were aligned with the literature; managing acute patients, being on call and making mistakes. Unfortunately, as the samples for each group were uneven, comparisons could not be made at this stage, but years 1 and 2 data will be combined to enable this for the final report. Qualitative data has been transcribed and analysis has commenced, preliminary results will be available by May 2018

Discussion:
The initial results are favourable when compared with the literature. The GMC in 2014 found that overall 70% of new FY1s felt prepared for practice(7); this study compared favourably, with 74% of students feeling prepared for practice. Other authors have found that students/new doctors feel unprepared for prescribing(3, 8-10), non-technical skills(3, 11-13), and dealing with acutely unwell patients(12, 14). The early results of this study do not support these issues; with high levels of preparedness for all competencies in these areas apart from ‘leading a team’ and ‘adapting to changing circumstances and uncertainty’. It may be that, with more participants that these figures will change however whether the high rates of preparedness are directly related to the simulation courses remains to be seen.

References:


Ref: 034, Thursday 12th July, 2.00-2.20pm, C9
Medicine Calling: Evaluating a different approach to the recruitment crisis in psychiatry
R Winter, H Andrews
University of Leicester

Background:
Psychiatry recruitment is in crisis1,2,3 at a time when demand for psychiatric services is continually increasing. In particular, there is a failure to attract British graduates to the specialty1, with only 4-5% of newly qualified doctors selecting psychiatry as their first preference5.

The factors that affect recruitment to psychiatry are multiple, complex and not fully understood. It is known, however, that from their first year, medical students are exposed to destructive and disparaging criticism of psychiatry by other doctors, academic staff and from their peers6,7. The development of a negative and stigmatised view of psychiatry and psychiatric patients is not uncommon in medical students or doctors8-12. Knowledge amongst medical students about psychiatry as a profession is limited13, and much of what is believed presents psychiatry as out-dated, inaccurate, unscientific and unrewarding1,2,8,13.

Medicine Calling is a recruitment initiative for pre-medical school students that aims to provide a future generation of medics with a better understanding of the innovative, challenging and rewarding opportunities that a career in psychiatry offers. It encourages students to champion the profession to others throughout their medical careers. Medicine Calling provides opportunities and experience for students from a non-traditional and widening participation background to help create a more diverse future medical workforce.

Methodology:
Medicine Calling held three events during 2016 and 2017. Both A level and GCSE students were targeted through targeted recruitment drives across the Midlands, and nationally through the use of social media and web advertising. Students from a state school background and those meeting widening participation criteria were specifically targeted and encouraged to attend. Programmes for each event were designed and developed to engage and inspire young people about psychiatry with a mixture of key-note lectures and interactive workshops.

Results:
Four hundred and fifty students from across the country have attended an event over the last year. Post event, 80% reported they would consider a future career in psychiatry; 99% felt more knowledgeable about psychiatry as a profession; and 99% felt able to champion it as a career to others. Similar results were found in a follow-up survey one month post each event.

Discussion:
The results from the first cohorts of students are promising. Medicine Calling has opened young peoples eyes to a career they had not previously considered. Through longitudinal follow up of students who have attended a Medicine Calling event, we hope to show a sustained interest and enthusiasm for psychiatry as a medical specialty. While we recognise there will be no single intervention to tackle the recruitment crisis facing psychiatry, we feel Medicine Calling is an important part of the solution, providing a different approach by focusing on a population previously overlooked. Psychiatry is not the only specialty facing a crisis in recruitment, with primary care, acute medicine and paediatrics also struggling14. The Medicine Calling model may have utility for other specialties trying to attract and enthuse students to their profession. As recently highlighted by the Centre for Mental Health, a key priority for the future of the mental health workforce is the promotion of mental health careers in schools and colleges15. Future visions for Medicine Calling include continued conference and careers events, outreach materials for psychiatrists across the country to use in their local schools and sixth form centres, and the development of a work experience programme for local students from less advantaged backgrounds.

References:

Ref: 130, Thursday 12th July, 2.20-2.40pm, C9
Preparation to Pass by Presenting to Peers.

T Dowling, A Stanton, K Jones, H Bothwell
Swindon Academy, University of Bristol

Background:
Peer-assisted learning (PAL) is a well-established teaching approach with strong conceptual links to Knowles’ principles of adult learning. These principles suggest that adult students prefer to be active participants in learning and are most interested in subjects that they consider to be relevant and impactful to their job (1). This also relates to the concept of collaborative learning between teaching participants, concisely described in Vygotsky’s Zone of Proximal Development where students can assist each other to close the gap between their actual developmental level and their potential developmental level (2,3). PAL has been used widely in medical education and is considered beneficial to the overall attainment of learning objectives (4–6). However, evidence on how to employ PAL in undergraduate medical education is lacking.

This study aims to contribute to the evidence base for using student-led grand rounds (SGRs) as an effective implementation of peer-assisted learning for final year medical students. There is a paucity of evidence exploring the use of SGRs though there are suggestions that they are well-received by students; particularly of note was the students’ preference to the perceived non-threatening peer-led teaching interaction over didactic teaching by non-peers (7).

Methodology:
33 final-year medical students attended Swindon Academy, based at the Great Western Hospital, for their 12 week Senior Medicine and Surgery Unit (which is their last unit before their final written exams). A peer-led SGR was organised, covering many different medical specialities over 9 weeks for an hour and a half, facilitated by consultant of the respective specialty. Students were split into groups of 3-4 and allocated a week where they were presenting. Each group were required to find a case, develop learning objectives to cover and write a presentation for their peers with the support of the consultant.

After each session written feedback was obtained from both the student participants and student presenters. Quantitative and qualitative data was collected using numerical scales and open questions specifically asking for student’s perceptions of being taught by their peers.

Results:
Presenting students scored their confidence at presenting to peers as 3.9 out of 5, 4.1 for how useful they found presenting and 3.4 in how difficult they found preparing for the session. Students in the “audience” scored the SGR as 4.5 out of 5. This was higher than their previous general experience of peer-led teaching which was reported as 3.9.

Analysis of the qualitative data is ongoing. Feedback from “audience” students identified some key themes such as peer-led teaching providing a more appropriate “level” of teaching as well as greater interactivity. However, there were concerns raised from some participants that important subject matter may be omitted in peer-led teaching.

Presenting students reported that familiarity with their audience helped their confidence. Five students reported that they had presented before and felt that had prepared them for this. One group said that practising beforehand had improved their confidence and a couple suggested they were under-confident due to general dislike of public speaking.

Discussion:
Overall this study supports the use of PAL in undergraduate medical education and was successfully used in “pre-finals” students at Swindon Academy. The majority of students positively fed back on their presenting peers and considering acting as a presenter as a beneficial learning experience. Interestingly, many student presenters decided to evaluate their teaching using multiple-choice questions. A very quick and effective method of evaluating the information retention of your audience and this was done by many presenting groups without prompting.

References:
Sex and Bugs and Rock ‘n’ Roll – service-learning, engaging a community and improving health outcomes
S A MacPherson, JE Desrosiers, EP Coughlan, NM Dawson
University Of Otago, Christchurch

Background:
We present outcomes of a service-learning innovation, introduced within an undergraduate Population Health Course. “Sex and Bugs and Rock ‘n’ Roll” was designed to give hands-on experience of health promotion and augment teaching of sexual health, a subject often underrepresented in medical curricula despite being an intrinsic component of overall health 1. In common with other service-learning programs, we aimed to provide opportunity for experiential, reflective learning, whilst addressing the needs of underserved populations within the community 2.

Methodology:
Sex and Bugs and Rock ‘n’ Roll is a small-group module (10-15 students) for undergraduates which runs 8 times per year. Students were tasked with creating an intervention to improve sexual health outcomes for a vulnerable group. They had therefore to identify the group’s health needs, design an intervention and engage with the target demographic. Based on acknowledged inequities and epidemiological trends, topics were prearranged with Community Public Health who provided access to stakeholder groups. For example, in 2013 in Christchurch, New Zealand, a disproportionate rise in cases of syphilis was seen in the population of men who have sex with men (MSM). Syphilis therefore became the topic for one of our groups in 2014, with MSM as their target audience. Students were assessed on research, teamwork, design and implementation of their strategy. They were encouraged to reflect on their experience and provide peer feedback throughout. They received ongoing formative assessment from faculty and stakeholder groups. Course evaluations were obtained along with audience feedback for each module.

Results:
Students adopted a variety of multimodal multimedia presentations. Examples included a “Syphilis Flash mob”, “HPV - the Musical” at a local youth education centre, and interactive sessions on topics such as safer sex, chlamydia and hepatitis with groups at local prisons. Live music and drama were frequently used to convey key messages and were highly successful as a means of audience engagement.

Students’ knowledge of sexual health improved as evidenced by pre- and post-course test scores on sexual health (17% increase in post- versus pre-course test scores, the mean score rising from 76% to 93%). 100% of students completed these tests, and all reported increased comfort discussing sexual health matters 3.

Students and stakeholders clearly enjoyed the interaction and, as a faculty member, it was a privilege to witness prejudices being eroded. Students reported more positive attitudes towards their respective target populations and audience feedback reflected this new mutual respect. Target groups also reported positive changes in health behaviour. For example, prison nurses reported increased engagement following student interventions, e.g. appropriate enquiries regarding testing and treatment for conditions such as hepatitis and chlamydia.

Discussion:
Although initially sceptical, students rose to the challenge with resourcefulness and creativity. Dysfunctional groups were drawn together and hitherto unrecognised talents uncovered. Students were forced to learn in sufficient depth to teach. Such active learning was a particular strength of the course, targeting higher order cognitive skills rather than just factual recall. Arguably, however, the most valuable consequence was the connection of medical students with a previously unfamiliar demographic. Improved understanding and mutual respect between our future doctors and these underserved populations is a step towards dealing with the health inequities our community must address.

This brief integrated package improved knowledge, teamwork and communication skills. It enhanced the medical school’s activities in social engagement and there was evidence of improved health behaviours. Due to its success, “Sex and Bugs and Rock ‘n’ Roll”, initially just a 1 year pilot, is now an established component of the undergraduate course.

References:

Ref: 270, Thursday 12th July, 3.00-3.20pm, C9
Teaching team work- A multi-disciplinary undergraduate non-technical skills simulation programme

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Great Western Hospital (Swindon Academy University of Bristol)

Background:
It has been estimated there are 11,859 preventable adult deaths in English NHS hospitals each year1. Non-technical skills (NTS) are essential component of high quality team work which can minimise preventable errors in medicine. Furthermore, many surgical specialities have incorporated NTS skills into their trainee curriculums2 and the GMC have highlighted the importance of teaching NTS to undergraduate medical students3.

Our aim was to establish a multi-disciplinary team (MDT) simulation training programme to teach NTS to undergraduate medical and operating department practitioner (ODP) students.

Methodology:
The MDT NTS pilot programme was commenced in October 2017 for 4th Year Students undertaking their perioperative care block at Great Western Hospital and 2nd year ODP Oxford Brookes University students. Undergraduate medical students were given a formal lecture on NTS before the start of the simulation sessions. Each simulation session involved a MDT pre-brief and simulation suite orientation, a NTS teaching session, three simulation scenarios based on the taught NTS and post-simulation debrief sessions orientated on NTS. NTS taught were leadership, team work, communication, situation awareness and decision making.

Data was collected prospectively following each session using feedback questionnaires. The participants were asked to rate confidence and knowledge of Non-Technical Skills using a Likert scale 1-10 pre and post the simulation sessions. Additional white space questions were added to allow students to provide qualitative feedback.

Results:
So far two cycles of the programme have been completed involving twelve forth year medical students and twenty nine second year ODP students have attended the simulation component. Early indications show that the students’ knowledge of non-technical skill increased by 45% following the pilot programme. All participants demonstrated increased confidence in all aspects of the NTS following the programme.

In the descriptive answers they reflected on the impact the course had improved clinical behaviour. One participant describing an event in theatre recovery. “There were minimal free staff…a de-saturating, low resp rate patient becoming unrousable… (I) got a guedel and jaw thrust and high flow oxygen and suggested opiate overdose…naloxone was given. I wouldn’t have felt so confident to do this if it hadn’t of been from what I learnt in sims”

We are planning two further cohorts of students. We estimate this to involve 15 medical students and 30 ODP students. Further data and reflections will be collected. Quantitative data will analysed using a paired T-test for statistical significance. Qualitative data will be analysed using a thematic approach. We plan to conduct a focus group to further evaluate the programme.

Discussion:
We feel that these provisional results provide evidence that MDT NTS simulation teaching sessions improve students’ knowledge, confidence and practical application of NTS.

We feel that this work provides further evidence that NTS should be routinely incorporated into the undergraduate medical curriculum. This work highlights how NTS can be taught effectively in an MDT environment. We hope that the structure of these teaching sessions can provide a framework for teaching NTS to undergraduate students. We plan to undertake further work to validate this research in more depth.

References:

Ref: 280, Wednesday 11th July, 3.20-3.40pm, C19
Teaching undergraduates chronic disease management through group clinics: sometimes, more is more
F Birrell, T Jones, K H C Li, M Russell-Westhead
Newcastle University

Background:
Group clinics involve one or more clinicians seeing several patients together in one room, allowing longer contact time, patient peer to peer learning and in-depth discussion of shared concerns. Inflammatory arthritis group clinics were piloted in Northumbria in 2008 and have been established since 2010 in two hospitals, with a third added in 2016. This model of care has become very topical [1 2] and undergraduate students observing them have enjoyed very positive learning experiences. After attending a single two-hour session, patients show significant improvement in activation. However, there has been no previous study of group clinics as a learning and teaching tool in undergraduate medical education or data on the effect on caregiver patient activation measured in students. This study focuses on third year medical students on their long-term conditions rotation at the Northumbria Base Unit of Newcastle University (January-June 2018). All are being invited to attend a group clinic and the impact of group clinics on student learning and on patient satisfaction and engagement in undergraduate education assessed.

Methodology:
Mixed methods: prospective observational cohort study, with all third year medical students (21-23 per cohort) invited to attend a single group clinic at Alnwick Infirmary or Wansbeck General Hospital (with 18-25 patients) during the three musculoskeletal teaching weeks of the long-term conditions rotations. Invitations were sent via email by the usual undergraduate administrators, which included a copy of the educational poster used, and in person, where an introductory video was shown [3]. Students attending completed pre- and post-clinic questionnaires assessing their learning objectives and caregiver patient activation measure. This was triangulated with qualitative focus groups and interviews for the patients attending (under existing ethical approvals), to explore the effect of medical student attendance on their care and to identify and seek to address any issues raised.

Results:
Full data will be presented on the take up of this educational opportunity, pre-and post-group clinic, including summary statistics and any significant changes.
Qualitative data will be analysed using nVivo and mapped to the previously identified five main enabling themes: Efficiency, Empathy, Education, Engagement and Empowerment, plus identification of any new themes. Similarly, if new themes are ascertained, this may modify the five promoters we have previously articulated to translate these themes into clinical practice: Prioritisation, Personalisation, Participation, Pedagogical approach & Personality.

Discussion:
Group clinics are a sustainable, clinically effective and efficient method for chronic disease care in the UK. They can be used to offer a novel educational experience encompassing a more diverse range of patients than conventional outpatients, ward based clerking or small group teaching sessions. Students enjoy learning the principles of chronic disease management through attending a group clinic and this may lead to long-term effects in the delivery of chronic disease care, especially if students exposed to the model as undergraduates are more likely to use it in practice. As Health Education England North East is currently supporting training fifty general practices in the region, this may be the time to consider including group clinic education in the curriculum.

References:
1 Ramdas, K. and Darzi, A. Adopting Innovations in Care Delivery- The Case of Shared Medical Appointments, N Eng J Med 2017. 376;12, 1105-1106
3 Group clinics | Alnwick Northumberland - What the patients say
https://vimeo.com/242809838; accessed 10/1/18

Ref: 404, Wednesday 11th July, 3.40-4.00pm, C19
The development of human values in medical education
E Gill, B O’Neill, S Li
GKT School of Medical Education, King’s College London University, London

Background:
The call for values based medicine has gained attention in recent years. This presentation offers an innovative design to incorporate Human Values as a strong theme in a MBBS curriculum.

In recent years health and social care have been under a negative spotlight, exposing lack of care, compassion and humanity.

This has led to a re-emergence of notions of humanistic values in medicine, making a new space for learning about values-based medicine in medical education.

Human values provides an encompassing definition of medicine, and bridges the gap between techno-centric and caring based learning.

There has been a longitudinal clinical communication curriculum at GKT School of Medical Education since 1998. This has largely met the UK Council for Clinical Communication Teaching consensus document in 2008. The issue for us has not been the topics of our teaching, but the depth of it as experienced by individual students.

Disseminating it out to clinical areas and making transparent reflexive relationships with linked subjects: medical ethics and law, professionalism and well-being, medical arts and humanities, interprofessional education, cultural competence and clinical skills remained elusive in parts.

Sir Kenneth Calman stated in 2006 that there needed to be closer integration with related subjects such as clinical communication, professionalism and the arts to allow students to apply theory and knowledge. He further recommended an ‘investment in people and for science and the arts and humanities to work together’

Evidence indicates that despite the aims for professional formation in students through ‘teaching’, we end up with professional deformation and repression of personhood and humanistic qualities. Is this repression due to the lack of organised avenues to channel thoughts and questions, or an inevitable result of the attributes and behaviours that are valued as ‘professional’, at the expense of those that are deemed ‘personal’, separate and somehow unprofessional? Despite providing ‘professionalism teaching’, the integration of well-being, creativity, reflection and resilience in our students has been under developed through medical education.

We endeavour to offer innovative learning experiences to prepare our students to work collaboratively, develop leadership qualities and maintain a sense of integrated personhood in a person –centred longitudinal spiral curriculum.

Methodology:
Human Values (HV) in Medical Education is a vertical strand running through the MBBS curriculum in the Values Based Clinical Practice theme. HV provides a home and pedagogic approach in which to situate the subjects outlined above. These subjects naturally link, overlap and support the notion of a values based approach that incorporates person-centredness from the patient and health professional perspectives. HV houses the related graduate outcomes as outlined in Tomorrow’s Doctors 2015 and covers aims outlined in the International Charter for Human Values

Results:
This section of the presentation will focus on outcomes from the first phase of the innovation (2016-17) attained through:

Ethnographic observation of tutors and students, self-completing questionnaires with free text, focus Groups and anonymous on-line evaluation. Key themes focus on: Person centred communication, on-line learning, confidence, response to scenario opportunities, observation, discussion and feedback, reflection, response to simulation experience/interaction, clinical skills, additional comments.

Discussion:
Learners and facilitators responses through qualitative and quantitative methods provide a positive picture in all domains. Students gained confidence, early insight into person –centred care, indicate a positive trend towards sense of self and their position as a medical student, enjoyed the integrated patient scenarios and valued facilitators, simulated patients and peer tutors. Values based preparedness for clinical practice continues to be expanded throughout the curriculum.

References:
3) Michael W. Rabow, MD; Carrie N. Evans, MA; Rachel N. Remen. Professional formation and deformation: repression of personal values and values and qualities in medical education. Family Medicine, vol 45, no 1. January 2013
5) Tomorrow’s Doctors: outcomes and standards for undergraduate medical education. General Medical Council 2015

Ref: 281, Wednesday 11th July, 4.00-4.20pm, C19
The perfect match: Can the mentoring experience be enhanced by a pre-scheme matching process?

D McCluskey, H Bothwell, S Mullins, L Ting, K Jones
Great Western Hospital, Swindon

Background:
Mentoring schemes within medicine have long been recognised as beneficial to the medical students that participate (1). A mentoring scheme for final-year medical students was established at The Great Western Hospital (GWH), Swindon in 2012, and was highly rated by mentees and mentors alike (2). Key effects of the scheme included help with examination preparation and improved confidence (2). As such, the mentoring scheme continues to be offered to final-year students on placement at GWH. Feedback continues to be overwhelmingly positive, however there does appear to be a recurrent suggestion that time constraints and rota clashes may act as barriers to full participation (2,3). In addition, mentors have suggested that mismatched expectations may be a barrier to an effective mentoring relationship (4). Indeed, finding a good match between mentee and mentor has been identified as important to establishing a successful mentoring relationship (5). With this in mind, we attempted to enhance the mentoring scheme offered for the academic year 2017-18 with a pre-scheme matching process, aiming to align the mentee’s needs and objectives with the mentor’s availability and speciality.

Methodology:
All final-year students commencing placement at the start of the academic year at GWH were offered a place on the mentoring scheme to throughout the autumn semester. Mentors were recruited from the junior doctor cohort. A pre-scheme matching questionnaire was distributed to all participants. Mentees were categorised in the first instance according to how frequently they would like to meet up, and then according to their key areas of interest to be covered within the scheme. Mentors were then matched accordingly. A retrospective analysis was then conducted using post-scheme questionnaires comprising Likert-type scales and free-text response boxes, which were collected from all participants.

Results:
All but one final-year student (n=32) opted in to the mentoring scheme and twenty-nine junior doctors were recruited. Pre-scheme, 100% of the mentees were looking for mentoring sessions at least two to three times per month, and were most often looking for help with presenting clinical cases and bedside teaching. The matching process was successful in that all students were closely matched to a mentor able to offer their preferred frequency of meetings, with a good match between key areas of interest.

100% of students and 79% of junior doctors responded to our post-scheme questionnaire. 59% of students rated the scheme as good or excellent. Most pairs met up a maximum of two to three times per month (41%), the remainder met up less frequently. Despite this, 69% of students felt they had enough contact with their mentor.

Barriers identified through thematic analysis of qualitative data from all participants centred around mentor workload. One mentor noted “student expectation” as a barrier to consistent contact throughout the scheme. Rapport was most frequently cited by mentors as significant to a successful mentoring relationship.

Discussion:
The GWH mentoring scheme continues to receive predominantly positive feedback, however matching mentees and mentors according to needs and availability did not improve the overall satisfaction rate significantly when compared to previous years. The same barriers continue to prevail in mentee feedback, particularly mentor workload and availability. Of course this is beyond the control of the scheme, and often of the mentors themselves, and is due to busy, unpredictable wards and shift work. Selecting mentors from less busy departments could help ease this problem, but may deny keen, dedicated mentors the chance to be involved with the scheme. Interest, enthusiasm, and rapport between mentee and mentor are essential, so appropriate recruitment, training and preparation of all participants is imperative to continue to provide a scheme valuable to all involved.

References:
5. Hale R (2000) To match or mis-match? The dynamics of mentoring as a route to personal and organisational learning, Career Development International 5:p223-234

Ref: 255, Wednesday 11th July, 4.20-4.40pm, C19
The relationship between medical students’ identity and stress: A longitudinal questionnaire study
B Burford, G Vance, D Kennedy
Newcastle University

Background:
Medical school is a stressful time for students. Among factors influencing stress and wellbeing is students’ identity – the extent to which they consider themselves as being members of a group. High identification as a medical student potentially has a protective effect against adoption of adverse norms, and so against stress [1]. The literature has also shown that medical students identify as doctors early in medical school [2], and may in fact identify more as doctors than as students [3]. This paper will consider the extent to which these identities are associated with a measure of stress [4]. Additionally, the role of family background associated with possible familiarity with the medical school context was considered.

Methodology:
Data were collected through a longitudinal cohort questionnaire completed by medical students between 2014 and 2017. This encompassed the first two university-based years, and the third hospital-based year of a five year programme following an integrated curriculum.

Questionnaires were completed by medical students at the beginning and end of their first year, and at the end of second and third years. Questionnaires contained a number of scales including the Perceived Stress Scale [4], and measures of the ingroup ties, centrality and affect [5] associated with identification as a doctor and as a medical student.

Linear mixed effects modelling in R was used to consider effects on stress. Perceived stress was included as an outcome variable. Fixed factors were questionnaire time point, the 6 identity scales, participant age and gender, and whether the participant had a close family member (parent/sibling) who was a doctor. Participant was included as a random factor. Criterion-based model selection was used to find an optimal explanatory model from the selected factors.

Results:
Perceived stress is measured on a summed scale of 10 items on a 5 point scale, giving a range of 0-40. Headline figures show an increase in perceived stress over the course of the study from 14.4 (sd=5.88) at the beginning of first year to 18.3 (sd=7.20) at the end of third year.

Model selection found that having a family member in medicine did not significantly contribute to the regression model, and nor did measures of identification as a doctor. These predictors were removed from the final model.

Significant effects were found for all medical student identification scales, for questionnaire time point, for gender and age. The direction of effects is indicated by coefficients.

Higher stress is associated with later questionnaires (beta=0.75), being female (beta=1.73), and higher centrality or importance of medical student identity (beta=1.20).

Lower stress was associated with being older (beta=-0.40), having stronger ties to the medical student group (akin to a sense of belonging) (beta=-1.83) and higher ingroup affect (the positive feelings associated with group membership) (beta=-2.40).

Discussion:
Results suggest that overall, stress increases through the first two years of study. Stress also varies with demographics, with older students seemingly less prone to stress, and women more prone than men. Age may be associated with greater experience of dealing with stress in the past, but while the gender effect may indicate differences in experience, it is possible that there is differential reporting between women and men.

The extent and type of identification as a medical student also affects stress. Feeling part of the group, and experiencing positive affect from that membership appear to have a protective effect, but feeling group membership is a central part of one’s identity may be a risk for stress. This makes intuitive sense, as the centrality of group membership may increase concerns that membership will be lost, whereas the other dimensions are indicative of supportive functions of group membership.

This remains a work in progress, and future analysis will explore more complex models including other measures including resilience and burnout.

References:

Ref: 411, Wednesday 11th July, 4.40-5.00pm, C19
“Women and Children First!”- Teaching the doctor’s role in safeguarding to Medical students using Simulation an update
L Kelsey, J Moffat, J Taylor, J Ford, A Woodman, K Jones, T Isaac
Great Western Hospital (Swindon Academy University of Bristol)

Background:
Simulation has been demonstrated to be desirable and useful in postgraduate training in child safeguarding1. However, safeguarding is the duty of all medical professionals and is outlined as a key skill to develop by graduation for medical students2. In the Great Western Hospital for the last three years we have been developing a programme of safeguarding teaching through simulation. This year is the first year where child protection and women’s health have been reviewed together.

Methodology:
Medical students at the Great Western Hospital were given Women and Children’s Safeguarding training through simulation. This was delivered using with MDT input from safeguarding nurses, third sector professionals and child actors.
Students were subsequently asked by questionnaire to self-assess knowledge and confidence of specific safeguarding scenarios (e.g. accidental poisoning). Qualitative feedback was also gathered

Results:
Results from the preceding three years was reviewed, to date the following numbers of students have received simulation training in the following safeguarding areas:
• Women’s health 52
• Child protection 44
• Child Sexual Exploitation 19
In each area knowledge and confidence has been demonstrated to increase each year. Preliminary results from this year are also promising.
Students were very positive about this teaching for example stating:
‘extremely valuable’
‘I can’t believe it’s not a compulsory session for all medical students’
Learning was demonstrated in regards to all safeguarding topics covered. Self-assessed knowledge (rated 0-5) increased in all topics taught with the greatest increase in knowledge of accidental poisoning rising from a mean of 1.7 out of 5 to 4.3 out of 5.

Results demonstrate possible effect on student’s on-going practice. Qualitative feedback from participants included the following:
‘helped us reflect on and improve our practice for the future’
‘Really valuable ...to see where you’re going wrong and can improve so it’s not daunting when we're faced with this on the wards as medical students or even as doctors.’
Full statistical analysis of both current and retrospective data will be completed when all 2017/2018 data has been collected.

Discussion:
Safeguarding is a difficult topic to teach as it requires multifaceted teaching to increase understanding, improve communication skills and facilitate attitudinal learning.
Management of a safeguarding scenario is rare for students to be involved with so in the short term the effect of training on practice will be difficult to assess. However, there would be scope to review this in future by a survey of the group once they are working as foundation doctors.
Simulation offers a method to address these problems and we have demonstrated efficacy in improving confidence and self-assessed knowledge of a number of safeguarding topics. There is potential to expand this work to other areas of adult safeguarding and to further assess the efficacy of this teaching in future.

References:
1- Hall D, de Munter C, Ninis N, et al, G72 Simulation training in safeguarding children and adolescents: trainees want it, trainees like it and we need to deliver it, Archives of Disease in Childhood 2015;100:A30
2- General Medical Council, Tomorrow’s Doctors: Outcomes and Standards for Medical Education: Outcomes 2- Doctor as practitioner, 2009, p 19-25

Ref: 276, Wednesday 11th July, 5.00-5.20pm, C19
Abstracts Submitted under the TEL submission category and accepted as Presentations
Asynchronous unsupervised video-enhanced feedback as effective as direct expert feedback in the long-term retention of practical clinical skills: Randomised trial comparing two feedback methods in a cohort of novice medical students

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Newcastle University

Background:
The acquisition and competence of a core set of practical skills is an important component of undergraduate (UG) medical training in the UK. Achieving competence requires repeated opportunities to practice, either on real patients or in simulations, alongside a means of evaluating performance levels. To achieve this, UG and postgraduate (PG) medical curricula are increasingly replacing patient encounters with simulated scenarios. Simulation teaching compliments traditional teaching methods and facilitates active learning by providing immediate and individualised feedback when preparing medical students for clinical practice.

Feedback from an expert is arguably the gold-standard but self-review of videos may improve performance equally well and previous studies have suggested that video feedback might have a valuable role in medical education however the paucity of evidence for the efficacy of video-enhanced feedback in long-term skills retention persists.

This study aimed to determine the degree of practical clinical skills’ retention over a 7-week period after receiving either video-enhanced direct expert feedback (DEF) or asynchronous unsupervised video-enhanced feedback (UVF) following a clinical task.

Methodology:
A prospective single-blinded randomised trial was conducted over a seven-week period with 42 novice medical students. Following a generic introduction, PowerPoint presentation and live demonstration of intravenous cannulation, by an expert, candidates performed the same task in isolation whilst being recorded and were randomised to receive either DEF or UVF. 20 students were randomised to receive UVF and 22 to receive DEF. Candidates returned to repeat the video-recorded task at Week 1, 4 and 7, with no further feedback provision on these occasions. Performances were fully anonymised and independently marked by two expert assessors who had been blinded to both arms of the trial.

Results:
No significant difference existed between demographics of either cohort. Good between-assessor score correlation was noted, with an intra-class correlation coefficient (ICC) of 0.89. The DEF arm significantly improved from their pre-feedback performance at Day 1 on repeating the skill a week later (p<0.0001); this improved score was maintained throughout the duration of the study. The UVF arm showed a non-significant improvement; however, there was no significant difference in the scores between the UVF and DEF groups at any point in the trial.

Discussion:
The results shown in this study, especially those demonstrated in the DEF cohort, suggest there is merit in providing video-enhanced feedback to students and video-technology may play a significant role in the provision of feedback for practical skills. The ability for experts to provide remotely delivered but individualised feedback can be an efficient use of valuable resources, while students being able to self-assess their own performance alongside an expert video has the potential to provide students with an excellent opportunity to learn clinical skills without requiring intensive educator involvement.

Video-enhanced feedback has the potential to revolutionise medical and surgical education, particularly where clear and simple procedural skills are involved. For feedback to be effective, it should be specific, delivered in a timely fashion and based upon first hand observed data. This type of individualised feedback is virtually impossible in current medical cohorts, where both staff and student time constraints and caps on financial resources limit the opportunity for this. Utilising video technology can help circumnavigate this difficulty by provision of high-quality, remotely-delivered, specific and individualised expert feedback, whilst providing students access to their own videos can be a valuable self-assessment tool.

References:
4. Cholerton S. National Student Survey (NSS). Summary of results 2013, University Learning, Teaching and Student Experience Committee2013.

Ref: 298, Wednesday 11th July 2018, 3.40-4.00pm, Sage2
Current opinion and use of video as a learning tool in undergraduate medical education
L Barnard
University of Bristol

Background:
In recent years, medical educators have faced unprecedented pressures (1). Technology enhanced learning has flourished, specifically the use of video, which has been an area of research for close to four decades (2). The evidence demonstrates the positive effects it can have to enhance engagement, attitude and retainment, influence knowledge, and develop skills. With the changing landscape of higher education, TEL can have further reaching benefits, helping to deliver an interactive and effective modern medical curriculum and ease some of the pressures (3, 4).

This literature review aimed to assess the current opinion and use of video as a learning tool in undergraduate medical education and understand areas for improvement and further development.

Methodology:
PubMed and Web of Science were used as primary databases for this search. Based on the aims outlined above, key terms were identified to include ‘video’, ‘undergraduate medical education’, ‘teaching and learning’ and exclude ‘video feedback’. This returned 76 and 67 respectively. As this study aims to assess current opinion, searches were limited to the previous 5 years. Some necessary exclusions were then made for articles with no access, in languages other than English, proceeding papers and editorial material. 16 articles were deemed to contain content irrelevant to the study. Finally, searches were cross-referenced and merged leaving 46 records included in analysis.

Results:
The 46 records were categorised by subject area. Across these, 18 discrete categories were identified. Subjects reliant on visual learning were those heavily mentioned including clinical skills and anatomy (n=7, n=6). Papers assessing video in general study (subject non-specific) were most common (n=8).

Country of origin was assessed, with the United States had the most contributions n=16 followed by Netherlands and Canada, both n=5. The United Kingdom and Ireland represented 3 results. Time trends demonstrated an increase in number of publications between 2013 and 2016 by 117%. Number of publications in 2017 was lower than 2016 (n=10, n=13) but still superseded previous years.

The majority of results concluded favourably towards video usage; citing improved recall, satisfaction, exam scores, retention and confidence in performance as some of the benefits. Furthermore, several results showed video was as effective as other methods of teaching

Not all studies showed outcomes in favour of utilising video, however, especially at the start of their undergraduate studies. There was evidence that video has poorer outcomes when used as a substitute for teaching sessions and ease of access was mentioned.

Discussion:
With regards to the ‘how and when’ of video usage, the formula to optimise these outcomes remains uncertain. It appears balance and integration are the key.

From this work, video appears under-utilised within UK medical education. Where it is used, it is predominately confined to clinical skills and anatomy teaching. Educators should feel confident that there is scope for an increase in video utilisation in other areas of the curriculum.

The negative aspects of video highlighted here, including student preference, cost (both monetarily and time) of creating novel resources and its substitutive use must be addressed. Furthermore, there are several areas less clearly defined in the literature, including copyright, ethics and the technological availability (devices, software and connectivity) of students and institutions.

Further work is needed, with a focus on these areas. Surveys of UK medical cohorts to confirm literature cited from other countries with regards to student preference and their current self-study video usage would be appropriate, as would novel studies into the gaps within the literature to safeguard institutions and individuals and optimisation of this increasingly popular tool.

References:
Exploring how experts and novices use ‘just in time’ learning (using mobile technology) in clinical decision making.
G Murphy, L Byrne-Davis
University of Manchester

Background:
Patient safety data has emphasised the need for doctors to better understand their own metacognition and cognitive biases in order to reduce error (1). It has also been shown that it is harder to unlearn faulty heuristics (debiasing) than learn the optimal ones initially (2). Ultimately this has led to an increase in clinical reasoning teaching in undergraduate medical education.

Online mobile devices have revolutionised our ability to instantly access information and increasingly this occurs within a patient consultation. This has been termed ‘just in time’ learning (3).

Despite an increasing trend towards clinical reasoning teaching in undergraduate medical education there has been less research on how accessing ‘just in time’ learning may alter the reasoning process. For example it is unclear whether learners access information to confirm their working diagnosis (confirmation bias) or whether it alters their clinical decision making.

Methodology:
Recruitment of 15 experienced GP’s and 15 medical students to answer clinical vignettes in real time with access to an internet enabled iPad/computer. I will screen capture the online resources that are used and ask participants to ‘think aloud’ to understand their their clinical reasoning whilst working through the case. This will be audio recorded and transcribed. The thematic analysis will be matched to the screen captured data to determine how accessing information online altered reasoning. If cognitive biases materialise I hope to understand whether accessing online information impacted on this.

Results:
I hope to start data collection in March so results should be available by the conference. I hypothesis that students will take longer to access useful resources to help with clinical decision making as oppose to GPs. I suspect that searching information online encourages backwards diagnostic reasoning (whereby a diagnosis is searched for as a oppose to a cluster of symptoms) and this may result in confirmation bias.

Discussion:
Overall, I am hoping to discover what things medical students & GP’s look up, what search terminology they use, which online resources they access and most importantly how it affects their clinical decision making in terms of both diagnosis and management plans.

References:

Ref: 406, Thursday 12th July 2018, 2.20-2.40pm, Sage2
Exploring the use of vlogging within a WhatsApp group to capture third year medical student’s real time reflections during a student selected module in Yoga and Mindfulness at Imperial College.
E Gunning, H Wilson, J Horsburgh, S Powell, S Kumar
Imperial College London

Background:
The General Medical Council states that a doctor’s ability to reflect forms an essential part of Good Medical Practice and continuing professional development (1). Undergraduate medical education plays an essential role in the early development of reflective learning skills, and leads to enhanced critical thinking skills and professionalism (2). The use of social media within medical education has been shown to improve knowledge and maintain attitudes such as empathy (3), whilst being regarded positively by students (4). Novel methods of reflection are emerging which embrace social media, such as blogging and virtual online groups (3,5,6). Much of social media, such as Instagram and YouTube, rely on visual and auditory media, and the use of video-logs (vlogs) is commonplace. Currently, however, there is little evidence exploring the use of vlogs to capture ‘real-time’ reflections in medical education, yet vlogs may be more acceptable and accessible to medical students familiar with this technology than traditional written methods (7). Similarly, while WhatsApp groups have been used within medical education, e.g. to reflect upon acts of compassion witnessed by medical students (8), the acceptability and feasibility of this method to capture and share reflections within a group has not yet been evaluated. Combining novel digital multimedia such as vlogging, with modern technology such as WhatsApp, has the potential to motivate students to more effectively engage with reflective practice, potentially at a deeper level than traditional methods (9). This study aims to explore the acceptability and feasibility of using vlogs to capture real-time student reflections and subsequently sharing them with peers within a WhatsApp group. We will also explore students’ perceptions of the effect that these methods have upon their ability to reflect, in comparison with traditional methods.

Methodology:
At Imperial College, London, half of all Year three students undertake a 10-week Medicine in the Community attachment, which includes a student-selected special choice module (SCM). ‘The science of yoga and mindfulness’ SCM takes eight students, three times per academic year. During this module the students undertake mindfulness practices at home in addition to face-to-face teaching. They reflect on these experiences using vlogs, which they share within a private WhatsApp group, accessible only by those doing the SCM, the yoga teacher and the course lead, who promotes and moderates the reflections and comments. A voluntary student focus group is held after each module to explore the research questions. An inductive approach to questioning is employed, developed according to the narrative and themes which developed within the WhatsApp group during the module. Student consent has also been obtained in order to thematically analyse the WhatsApp group content.

Results:
The WhatsApp group thread and focus group transcripts will be analysed qualitatively, using open and axial coding. The key themes from the focus groups and WhatsApp groups will be presented at the conference. Initial findings suggest a mix of views, with students valuing the authentic nature of vlogging over written reflections, but were more reticent about sharing these within the group due to concerns such as their appearance in the videos.

Discussion:
The findings are likely to add to the body of evidence related to the effectiveness of harnessing social media within medical education. They will shed light upon whether students may benefit from the peer learning and support provided by WhatsApp groups, and whether vlogging could motivate students to engage more effectively with reflective practice in similar settings. It is likely that these methods of capturing and sharing reflections will not be suitable for all areas of medical education; however they may provide another option which could be transferable to other areas of the medical curriculum, across disciplines, or in postgraduate settings.

References:

Ref: 349, Wednesday 11th July 2018, 4.00-4.20pm, Sage2
Game on: Gamification to increase internal motivation
V Thakerar, D Hunukumbure, R Chitkara
Hillingdon Hospital

Background:
Medical students readily volunteer many hours to fulfilling the objectives of a video game, but sometimes appear less motivated to fulfil the objectives of the curriculum. Video games have evolved over the past four decades to become highly engaging and rewarding. Gamification can be defined as “the process of game-thinking and game mechanics to engage users and solve problems” (1). There is growing interest as to whether the elements of game design that drive this internal motivation to improve could be applied to medical education (2).

A 2016 landscape review of the literature described seven possible benefits of gamification of medical education. These were increased engagement, enhanced collaboration, real-world application, clinical decision making, distance training, learning analytics and swift feedback (3). Randomised controlled trials comparing gamified teaching methods to traditional methods have not yet shown improved behaviour by healthcare professionals, although there is some evidence of a more positive reaction to the gamified teaching method and of improved learning (4).

The purpose of this study is to develop a video game to teach common acute medical conditions that generates a positive reaction in medical students and improves objective measures of learning compared to traditional methods. This corresponds to the first two steps of Kirkpatrick's learning evaluation theory. The study could then be expanded to evaluate the third step.

Methodology:
This is a pre-post intervention study. Fifty eight year 3 students will be given a pre-intervention multiple choice test on acute medical conditions. This test will be validated by an acute medical consultant. Test feedback will not be given at this stage. The students will then be given access to a novel video game designed using the open source software Quest (http://textadventures.co.uk/quest). The game will contain acute medical scenarios, with a branching story path that varies with the decisions made by the student. The game will track answers given, user engagement and hours logged. After four weeks, the students will be re-tested on the acute medical conditions. The primary goal is to assess whether engagement with the video game (as measured objectively by hours logged and subjectively by student feedback of how engaging the student found the game) correlates with any change in the post intervention test score.

The study period is as follows:
05.01.2018 – Quest-based game designed and coded
22.01.2018 – 1st group of students given access to the game and pre-intervention test done
19.02.2018 – Post-intervention test done
19.03.2018 – 2nd group of students given access to the game and pre-intervention test done
16.04.2018 – Post-intervention test done
30.04.2018 – Expected completion of results, analysis and conclusion

Results:
We expect to present the student perception of the game as a method of learning. We also expect to present how the hours of game time played correlated with any changes in the test scores.

Discussion:
We hope to develop a novel game that improves intrinsic motivation and engagement, as well as improving acute medical knowledge.

References:
Learning clinical documentation with simulated patient encounters
E Chang, M Camilleri, J Newman, JP Dilworth
University College London Medical School - Royal Free Campus

Background:
Clinical documentation and record keeping are an integral part of any healthcare professional's daily practice. Trainee doctors in particular are often tasked with documentation of patient encounters, with these activities taking up a significant proportion of their working day; a 2006 survey of 16,402 internal medicine trainees, for example, found that 67.9% spent over four hours a day on documentation, while only 38.9% spent the same amount of time in direct patient contact (1).

Clinical documentation has important implications for patient safety, professionalism, and clinical governance (2), but despite its ubiquity and importance it continues to be done poorly (3). Furthermore, relatively little can be found in the literature with regards to how it is taught, or indeed if it is taught at all. In response to this educational need, we piloted a teaching session for undergraduate medical students at a London teaching hospital, with the aims of introducing key concepts around clinical documentation and demonstrating a structured approach to the documentation of patient encounters through the novel use of a videotaped simulated ward round.

Methodology:
We developed a 45-minute long teaching session for a cohort of approximately 25 students at a time, delivered monthly over three months by a single facilitator in a classroom setting. This session introduced the students to national guidelines around documentation and record keeping and reinforced their pre-existing knowledge of the ‘SOAP (subjective, objective, assessment, plane) note’ (4). The students were then asked to watch videos of two simulated ward round encounters and to document in real-time as if they were the trainee doctor present on the ward round. Following the session, all students (n = 76) completed a survey assessing their attitudes towards documentation and their confidence in their ability to document real-life encounters on a 5-point Likert scale. Qualitative analysis was carried out to identify common themes within free text responses.

Results:
There was a statistically significant improvement in students’ self-reported confidence ratings from a mean of 1.89 to 3.35 (p 0.05) following the session. 81.6% of students felt confident in using a documentation framework such as ‘SOAP’ in real clinical records. 88.2% felt that the videos were a realistic simulation of a real ward round, and 53.9% reported having documented or having been asked to document in a patient’s medical records previously. All students stated that the session was relevant to their future practice. Thematic analysis of free text responses suggest that what students found most beneficial was the opportunity to practice documenting in real time (46.7% of responses), with 24.0% of responses making specific reference to the use of videotaped simulated encounters.

Discussion:
Our results suggest that formal teaching on documentation has benefits for undergraduate medical students. The retention of these skills and their effects on future practice remain to be seen. The use of a videotaped simulated patient encounter for the practical application of this important clinical skill, however, represents a low-cost educational strategy that can be effectively implemented for large groups of learners and can be translated easily into the digital learning space.

References:

Ref: 370, Wednesday 11th July 2018, 4.40-5.00pm, Sage2
Let the games begin: student’s perceptions of Socrative®, a ‘gamified’ automated response system.
CTimms, L Kelsey, J Hartland, K Jones
Swindon Academy, Great Western Hospital, University of Bristol

Background:
In medical education there is a current movement away from traditional teaching methods to methodologies involving student’s active participation. The use of ARS (Automated response systems) in medical education have shown to have positive outcomes for medical students including attentiveness, engagement and increased interest in topic studied. Further to this ‘gamified’ audience response system, those with a competitive element, improved motivation and interest in a specific area of medicine. Socrative® is web based game in which students answer questions on an app on their phone, they score points for correct answer and speed of answering, on a central screen all students are taking part are in a ‘race’ against each other and the first to reach a certain amount of points wins the race.

Methodology:
Using the gamified audience response system, Socrative®, we devised sessions for 4th year medical students and nursing students during various placements at The Great Western Hospital that culminated in a Socrative® game at the end. We designed a post session questionnaire, using Likert scores and free text boxes to assess their experiences with using the gamified ARS and the effect a competitive element had. Further question looked at the gamified ARS session compared to traditional teaching methods and whether, after the session the students were more interested in this area of medicine.

Results:
So far we have 30 responses, 12 medical students and 18 nursing students, after three out of eight sessions planned. 86% of the students had never used a ‘gamified’ ARS before. 95% of students agreed or strongly agreed that they enjoyed the session with 71% enjoying the competitive element. 66% agreed that the competitive element made them more focussed with more than half, 58% preferring this session to traditional teaching methods. Finally 71% of the students were more interested in this area of medicine after the session. Specific comments about the session included, ‘The session encouraged me to learn more about medicines and I enjoyed the competitive spirit portrayed.’ and ‘It makes me interact, pay more attention, makes me think more, very interesting and good tool to revise’. Some students found the app slightly difficult to use with one commenting, ‘the app has a time limit which meant I was unable to read the questions properly’.

Further statistical analysis of the questionnaires will be available on completion of the planned workshops.

Discussion:
The preliminary data has so far shown that the students enjoy the competitive nature of the Socrative® session and the majority preferred it to traditional teaching methods. There was also an increase in the student’s interest in the area of medicine being taught. After completion of the session and analysis of the remaining data we hope to show Socrative® and other ‘gamified’ ARSs are a new and engaging way of improving student enjoyment compared to traditional teaching methods and may be used to improve interest in area of medicine, especially in those in which interest is waning.

References:

Ref: 126, Wednesday 11th July 2018, 3.20-3.40pm, Sage2
The utilisation of technology for Just-in-Time learning in clinical practice
A Al-Jabir
King’s College London School of Medicine

Background:
Technology is increasingly being used by clinical staff to access up-to-date information about clinical facts immediately prior to usage. One method of learning is immediate access to information at the point of need (just-in-time learning (JIT)) predominately via the sudden explosion in medical applications for smartphones. This study sought to investigate how students and clinicians use technology, which type of technology they preferred and to investigate the theoretical concepts underpinning behind just-in-time learning (JIT).

Methodology:
Medical students in a large London medical school (n=15) were supplied with a 7-point questionnaire asking them to complete a simple task (looking up the dose of IV Furosemide) and give free-text comments about technology-enhanced learning. Outcomes were assessed using quantitative and qualitative analysis of the surveys. Ethical approval was granted by a local Research Ethics Committee.

Results:
60% (n=9) successfully completed the task with 40% (n=6) choosing mobile versions of the British National Formulary (BNF) as their preferred method to complete the task. However, 26.7% (n=4) preferred traditional face-to-face methods of just-in-time learning by speaking to colleagues or a ward pharmacist. There was no statistical difference between the self-reported time taken to complete the task for each method. The free-text comments on the use of technology in learning focused mostly on its ability for speed and convenience (40% of respondents chose their preferred method of completing the task based on these factors) however respondents also commented on a concern about the need for up-to-date, reliable and trusted information.

Discussion:
This study is limited in its scope with a small sample size of individuals in an early stage of training and therefore further research (including semi-instructed interviews) is needed to investigate the issues raised in this study – especially of which technological systems do students and clinicians prefer to use. It is clear that technological solutions to JIT learning are becoming a popular model of learning and it is aiding clinical practice. It also showed that technology is playing an increasing role in the delivery of JIT learning but that the technology has a long way to go to be able to answer all types of clinical queries in a clear and efficient manner.
Using the Microsoft Surface Hub to integrate pre-clinical and clinical knowledge in case-based teaching.
T Subramanian, H Emery, P Rusby, S Stuart, M Van Eker, J Williams, J Sansom
South Bristol Academy, University Hospital Birmingham

Background:
Historically, medical education at university has centred on building a comprehensive understanding of basic science as the foundations for clinical medicine to be built upon [1]. Over recent years, however, there has been a shift in focus towards incorporating pre-clinical science into the understanding and practice of clinical medicine [2,3]. Facilitated mainly through case-based scenarios, current medical school teaching sessions are often aimed at consolidating pre-clinical knowledge by applying core physiological concepts to the ‘patient in front of them’ [4]; the ultimate aim being the improvement of clinical care on the hospital wards. Frequently, however, sessions incorporating both forms of knowledge are delivered exclusively by one group of teachers (pre-clinical scientists or clinicians) giving rise to the question: would a teaching session conducted by both pre-clinical and clinical tutors provide more effective and valuable teaching?

The Microsoft Surface Hub is a powerful, interactive, mobile desktop able to provide real-time video-conferencing and synchronous note-taking across sites of any geographical distance apart, connected via the Internet. In this study we used the Surface Hub as a medium to bring together pre-clinical and clinical teachers situated at different university departments to provide a single case-based teaching session focused on the clinical assessment, management and underlying physiology of a deteriorating patient.

The first aim of our study was to test viability: does using the Surface Hub to bring these tutors together result in a smooth teaching session which is both effective and convenient? Secondly, we aimed to compare efficacy: does providing an integrated teaching session improve the understanding of scientific and clinical principles of the case compared to a lecture-based teaching alone? Finally, we asked if using an interactive teaching session, mediated via the Surface Hub, would result in increased student engagement and confidence in applying the principles of basic science.

Methodology:
3rd year medical students at the University of Bristol commencing their first year of clinical medicine were asked to volunteer in the study. A cohort of 31 students were selected and split into two groups: A and B. Both groups were taught using a case-based teaching method focusing on the clinical status and changing arterial blood gases of a deteriorating patient. Group A were taught using a lecture-based teaching session facilitated by a single clinical teaching fellow. Group B were taught the same material using the assistance of the Microsoft Hub to broadcast a physiologist situated in a different building using their respective Microsoft Hub.

Students were asked to fill in a questionnaire before and after their respective sessions to assess both their confidence and understanding of arterial blood gas interpretation. The Questionnaire scores of Group A and B were compared to assess efficacy of the two teaching sessions. Students in Group B were then invited to participate in a focus-group providing qualitative data on the student’s perception of the effectiveness of the Surface Hub teaching session. In view of fairness, the groups were subsequently switched allowing both groups of students to experience both teaching sessions. Finally, a focus-group of both student groups was performed to compare the students' impression of the two teaching sessions.

Results:
A full analysis of the results will be presented.

Discussion:
We hope the Microsoft Surface Hub can effectively connect pre-clinical and clinical teachers to create effective, expansive and engaging teaching sessions. Pre-clinical teachers will be able to answer students questions in real time, encouraging further questioning and a deeper understanding of the case. By harnessing the experience of both pre-clinical and clinical teachers we aim to meld the underlying physiology with the clinical context, maximising our students’ learning experience.

References:
Where do I click ‘Like’: the benefits of online, social-media-enhanced student-created clinical learning material
T Bird, J Gandhi, M Harrison, H Thompson, N Yousaf, V Rodwell, N Court
University of Leicester Medical School

Background:
Medical education’s ideals are to not only impart to students appropriate knowledge and skills but also to equip them to contribute to the medical field, the community and global community as educators themselves. Medical students are particularly encouraged to teach, with many medical schools employing peer or near-peer teaching formally on the course; this also happens informally via student societies (1). The notion of cognitive congruence – the shared knowledge base between students and their peers – explains the preference many medical students have for learning from peers rather than non-peers, because peers teach in a way other peers need to learn (2). TeachMeAnatomy, launched by a Leicester Medical student, is an example of a student-created and curated set of online learning materials for medical learners in virtually every country of the globe. Lessons from TeachMeAnatomy, such as star ratings and comments may be transferrable to other projects of student-created medical educational material (3).

Methodology:
Research questions: Can medical students collaborate to curate and create online clinical learning material, enhanced by social media, that is useful, beneficial, and enjoyable for their peers? What would a successful and sustainable model of this look like?
Methodology: Working together with staff members, Phase 2 (year 4) students of Leicester Medical School created online collaborative environments for clinical learning materials to be curated, organised, presented and shared. Some material such as mock ward round videos in both normal and 360-degree video, were created by the students. Materials were arranged on online environment including social media-type elements such as a rating system, comments, corrections, suggestions for improvement, discussion, and was supported by social media postings and discussion on Facebook and Twitter. Data was collected in the following ways in a mixed-method approach: 1) Analytics such as numbers of hits from the online environment were analysed. 2) Site users (Leicester Medical students approximately N=1200 total) were surveyed to determine which materials were most useful and why, which features were helpful and enjoyable, how useful were the social media-type elements and whether social media helped to enhance their use of the materials. 3) Focus groups were carried out with fourth-year students to determine what materials they found most helpful to support their learning in clinical placement (for example, are mock ward rounds helpful) and what they would find useful for their medical studies in general.

Results:
Focus group and site analytics data will be gathered February through May 2018. Learning materials created include video-with-online questions mock ward rounds, and 360-video of mock ward rounds viewable with Google Cardboard devices. Students creating the online environment and materials benefited from their own inquiry-led work to create and curate material, and experiment with online collaboration and communication and social media. It is expected that site users will find it particularly useful to learn from videos of experienced clinicians leading and explaining in ward rounds, and will find the social media-type elements of rating and commenting on materials to spark their own feedback and improve learning in an enjoyable way. It is further expected that the best materials will be made available online for global reach.

Discussion:
Social-media-type elements, online availability, and authenticity of clinical scenarios including experienced clinicians all are valued features of learning material. A successful model of student-created learning materials includes such aspects as quality checks with staff, input from many students, and viewing and use encouraged through online sharing. Students creating and supporting such material must commit substantive time which must be considered in order for the model to be sustainable.

References:

Ref: 378, Wednesday 11th July 2018, 5.00-5.20pm, Sage2
Abstracts submitted and accepted as Posters
Incorporating Ultrasound into Undergraduate Anatomy Teaching: A Student-Led Multidisciplinary Pilot
S Rice, J Lehmann, J Mayhew, C Dean, F Gishen
UCL

Background:
More than ever, new doctors encounter anatomy in their day-to-day practice during clinical examination and, now, through a relentless increase in demand for modern medical imaging. New doctors are now expected to be as familiar with radiological anatomy as they are with the more ‘traditional’ surface anatomy. Indeed, there are now calls for radiological anatomy to rise to half of the total curricular time across a contemporary undergraduate programme. Clinical ultrasound (US) is a widely used first-line imaging modality, providing real-time functional imaging such as blood flow, peristalsis, and the influence of variables such as respiration and body fat. New technological advances have made US more portable and cost-effective; its use is now regarded as an extension of clinical practice in many specialties and is the standard for many point-of-care investigations. In addition, new doctors are expected to be as familiar with radiological anatomy as with traditional surface anatomy.

As a group of learners and teachers working together, we undertook an innovative student-led project introducing ultrasound as an adjunct to anatomical learning early in the undergraduate medical programme. We believe this approach, particularly when structures are demonstrated by an expert using the same technique as in everyday clinical practice, is highly acceptable to students and translates to early understanding and recognition of the clinical utility of ultrasound in clinical anatomy.

Methodology:
This study involves 9 structured 20-minute small-group learning sessions led by a clinical radiologist with randomly selected year 1 medical students during scheduled year 1 anatomy lab sessions. Working under ethics guidelines, volunteers are pre-screened according to our healthy volunteer protocol. Standardised sessions include an introduction to the technique of ultrasound and demonstration of key abdominal structures on the volunteer. Existing knowledge of the principles and basic techniques of ultrasound, as well as confidence in identifying ultrasonic anatomical structures is assessed with a questionnaire incorporating Likert-scale data to the whole cohort of year 1 students. Effectiveness and acceptability of the intervention is assessed with a repeat questionnaire after the structured sessions.

Results:
Full results from the pre- and post- questionnaire will be presented as will a proposed structure for rolling out the pilot across other sessions in the curriculum.

Discussion:
This pilot study enables us to ascertain the feasibility of this educational intervention, as well as its effectiveness in improving students’ knowledge of anatomical structures. The improvement in anatomical knowledge after the use of ultrasound has been mostly positive, but not unanimously so.

This pilot will be expanded and augmented to form the start of a focused, vertically integrated point-of-care ultrasound curriculum for medical students. Overall, the aim is that students will be better equipped with a range of essential anatomical and imaging skills needed for an unknown future in the healthcare.

References:

Ref: 338, Board: A1
Investigating digital and 3D learning approaches in anatomy education and clinical image interpretation
A B Awadh, J Clark, S Lindsay, I Keenan
Newcastle University

Background:
It is essential that medical students receive the highest quality of anatomy education to achieve an understanding of anatomical structure, functions and relationships during their training in becoming clinical professionals [1]. Anatomy education is continuously being updated to meet the necessary educational standards. Lectures, cadaveric dissections, plastic models and prosections are the standard methods used in most medical schools, while modern online and digital resources are also becoming more widely used [2, 3]. In our experience, there are several areas that students find particularly challenging. To further enhance anatomy education, and to address anatomical concepts that students find the most difficult, we propose that it is necessary to complement traditional and modern approaches by introducing resources that can address the most demanding aspects of anatomy learning. In this study, we have investigated state-of-the-art digital resources capable of fulfilling this need.

Methodology:
We sought to establish which specific anatomical topics (e.g. pleura, pericardium and peritoneum) and general anatomical concepts (e.g. membrane reflections, spatial relationships and clinical image interpretation) were considered to be the most challenging for medical students. Having identified these areas, we aimed to identify the reasons behind this, such as cognitive difficulties in 3D spatial manipulation with respect to arrangements of complex structures and mentally switching between 2D and 3D during interpretation of clinical images [4]. We proposed that certain digital resources could address and enhance these cognitive processes for specific anatomical features through providing an interactive approach to 3D anatomy and image interpretation. We considered the Virtual Human Dissector (VHD) [5, 6], SECTRA table, and Alioscopy screen, all of which provide students with opportunities to interact and manipulate cross-sectional images and digital renders of 3D anatomy to enhance their understanding of clinical images and spatial relationships. We utilised a survey approach to identify challenging areas of anatomy learning by administering a pre-validated Likert-type and free text questionnaire to medical students at Newcastle University, and subsequently implemented a focus group with a sample of study participants. We evaluated our resources and activities experimentally through pre, post and delayed testing, and through Likert-type and free text questionnaires and focus group approaches. Data were analysed statistically and by semi-quantitative thematic analysis.

Results:
We have identified areas of anatomy learning considered to be the most challenging by medical students and developed specific and effective observational and practical learning activities for use with modern digital learning resources. We have explored and compared the usage and learning gain in terms of knowledge acquisition and long-term retention achieved by students when using the VHD, SECTRA and Alioscopy resources for learning and understanding of 3D anatomy. We have also identified how these resources enable students to improve their skills in the interpretation of clinical images. We have identified student perspectives with respect to each activity and determined how they can most effectively utilise these resources to enhance their gross anatomy learning and clinical image interpretation.

Discussion:
Our ultimate aim has been to implement our approaches into the medical curriculum at Newcastle University. We have also provided anatomy educators with an overview of the value of cutting edge digital learning resources as a basis for introducing resources at their own institutions. We intend to explore other areas of difficulty for student learning of gross anatomy and embryology. We then aim to identify alternative innovative digital and 3D approaches, including 3D printing [7] and digital embryo models [8] to ensure that learning and teaching of these areas can be optimised.

References:

Ref: 186, Board: A2
Clinical Skills

Confidence in recognising complication: Self-reported confidence in performing basic clinical procedures, being able to recognise associated complications and managing these complication in by final year medical students.
J Green, F Whitehead, A Mukhtar
Royal Victoria Infirmary: Newcastle upon Tyne Hospitals

Background:
Newly qualified junior doctors are asked to perform basic clinical procedures from the first day on the job. Their undergraduate curriculum should equip them with the necessary skills and understanding to carry out these tasks with confidence in a safe and competent manner. The aim was to evaluate the self efficacy of final year medical student in performing four clinical skills that are asked of newly qualified doctors in a surgical placement. This was not limited to the procedure itself, but understand the indication for each and being able to recognise, and manage some basic complication. The aim was to ascertain if a training session using manikins had a direct impact on self confidence in these three domains, improving self efficacy.

Methodology:
A self-assessment questionnaire was issued pre and post training session to 38 final year medical students. The questionnaire required each student to rate their confidence levels in three domains; understanding indications, performing and managing complication of four basic procedural skills (nasogastric tube insertion, bladder catheterisation, digital rectal examination and suturing). The students completed a four point forced choice scale (1=not confident; 4=extremely confident) before undertaking a multi station practical session, focused on each of the four procedures. This was delivered in a simulated environment on training manikins. All four stations incorporated teaching material on each domain. Following the session, the students repeated the self-assessment confidence questionnaire. The data was analysed by analysis of variance and t test.

Results:
Thirty (79%) students responded. The mean level of confidence rated in the pre session questionnaire in recognising indication and managing the complication of these procedures ranged from 1.34 ±0.79 (suturing) to 1.82 ±0.92 (catheterisation) and 1.28 ±0.46 (suturing) to 1.72 ±081 (NG tube insertion) respectively. Following the session mean score increased across all domains by at least 1 point, with NG insertion having the greatest increase +1.72. Self-reported confidence level improved across all four procedures (fig 2) following the teaching session (P 0.01). An overall improvement in confidence level of performing these procedures ranged from 1.64±0.63 (suturing) to 2.97±0.57 (NG tube insertion).

Discussion:
Even at the final stages of training, medical student have low levels of self efficacy in being able to recognise indications, perform and in the management of complications in basic clinical skills. The use of training sessions, where students can practice on manikins, has show to be effective in developing self efficacy. Future consideration would be to evaluate if self efficacy is preserved over time and if a correlation between confidence and competence.
Optimising hospital visits for first year medical students through introduction of a reflective logbook.
M Ahuja, K Fenton, J Buckley, K Hunt
Newcastle upon Tyne NHS Trust

Background:
In order to become a competent doctor, medical students must not only develop practical skills but also a sense of where they fit in an ever more complex NHS framework. Reflection is an integral part of this process. Development of such attributes is often a focus of the early stages of medical school. Research has shown that medical students find self-directed learning challenging due to a perceived lack of support. Newcastle University has revised its curriculum, in part to address such challenges with hospital visits including reflective logbooks.

Research question: What is the impact of introduction of a reflective logbook on student experiences of early clinical exposure?

Methodology:
Five distinct hospital visits are planned over the course of the year allowing supervised history taking and examinations with patients and shadowing experiences with allied health care professionals.
A comprehensive logbook was developed for the students. This included extracts from GMC guidance, learning outcomes for the visits and the role students are expected to take within the hospital. We also included proformas for history taking and examinations with tips and suggestions for fluent questioning. There were sections for reflection on shadowing experiences and the visit overall to aid students in identifying strengths, weaknesses and personal development plans. Data was collected in the form of an online questionnaire, which requested long form answers and Likert scoring on confidence. was sent to the students after each visit and the results analysed.

Results:
Results are still being collected, however early responses have been overwhelmingly positive and suggests our introduction of a reflective logbook has been a useful learning tool. 94% of students reported that the logbook provided a good structure and guidance for their history taking.
“The logbook was helpful for both tracking my experience and reflecting afterwards.”
Students mentioned enjoyed spending time with allied health professionals, finding it a useful way to know how the various teams work together for best patient care.
“I shadowed an infection control nurse which was really helpful as it helped me to understand what this role is about and its importance in the hospital”
91% of students felt nervous before their first hospital visit and 95% felt that their confidence in history taking had increased after the visit.

Discussion:
The logbook was designed as a way to provide a coherent structure to the five visits so that students could link their learning from each visit to the next.
In depth conclusions will be available upon full collection of data.

References:
4) Newcastle University. Patients, Doctors and Society Study Guide. mbbs.ncl.ac.uk [Accessed 9th January 2018]
Simulated ward rounds - learning ward round skills through peer assessment and feedback
C Cathcart
Keele University Medical School

Background:
Ward rounds are a daily occurrence in hospital medicine and play a vital role in assessing patients’ on going needs and determining their care. The junior doctor plays a pivotal role in the smooth running of the round. Despite the importance of this activity and the predictability of this daily event little training and feedback is provided to develop proficiency in ward round skills. Medical students in practice attend ward rounds as part of their clinical learning activities. Despite this they may play little part in the organisation and delivery of the ward round activities due to a graded level of responsibility. In a simulated ward round the students will have to adopt a higher level of responsibility.

Simulated ward rounds have been developed by some medical schools in order to develop the understanding of the process and non-technical skills of medical students participating in this activity. These simulated activities have utilised medical students in a variety of roles including those of the junior doctor, nurse and patient.

Assessment and feedback made by faculty using a structured assessment of the student’s non-technical skills has in previous studies been well received and is believed to enhance learning when provided at the level of the individual or the group. Peer-assisted learning, through the provision of feedback on clinical skills training, has shown to be effective by studies such as Morgan et al(1).

We wish to improve the self-efficacy of final year medical students’ ward round skills through the use of a simulated ward round exercise that utilises structured peer assessment and feedback. We also wished to evaluate the perceived usefulness and acceptability of this exercise and of a novel feedback tool as part of their medical training.

Methodology:
Recruitment for the study will begin in January 2018. Keele University year 5 medical students on their secondary care block will be emailed inviting them to take part in the study. The sample size is likely to be approximately 30 students, and is a convenience sample based solely on the number of students studying at the Royal Stoke University Hospital.

This study will use written questionnaires. The participants will receive one questionnaire prior to the intervention. The second they will receive directly after completing the simulation in a debrief setting. The third questionnaire (identical to the first) will be given to the participants one month after the learning intervention.

The simulated ward round exercise comprising of 3 cases, each providing a technical challenge. The roles of the patients are scripted and to be played by medical students participating in the learning event. The role of the patient will allow the student to experience the patient’s perspective in terms of the functioning of the round and communication received. 2 medical students will play the role of the junior doctor responsible for organising and delivering the round. A member of faculty will facilitate the round by acting as the senior clinician responsible for decision-making. 2 medical students will observe the activities of the ward round team and provide feedback on the non-technical skills exhibited by the students’ playing the role of the junior doctors utilising a structured feedback tool. The tool consists of a series of observations against which the observer can assess the non-technical skills used to prepare for, deliver and organise the outputs (tasks) created by the ward round.

Results:
The results of the study will contain quantitative and qualitative data.

Discussion:
We anticipate that there will be an improvement in self-efficacy post learning intervention. We anticipate there will be an improvement in the specific non-technical skills as well as an increase in how frequently they are performed. We anticipate that students will be more likely to ask/receive feedback using the feedback tool.

References:

Ref: 063, Board:A6
WISE-A Practical Approach to Preparedness for F1
D Clark, E Bryan, E Pelham, M Hague, A Burney, A Graham, A Strachan
The University of Sheffield

Background:
Two years ago at Sheffield University Medical School we ran a successful pilot study utilising our simulation suite of wards to provide a scenario based experience called WISE (Ward Intensive Simulated Experience). In May 2017 we rolled out the experience for our final year Undergraduate cohort of 240 students after their final examinations and during their Assistantship. The aim of the experience was to become an F1 in a relatively safe environment. The purpose being to look at soft skills such as decision making, communication, prescribing, making a referral or deciding when to call a senior or indeed do nothing!
It was emphasised to the participants that this was not an Assessment.

Methodology:
Two simulated wards (male & female) with an intervening control room were set up and staffed with F2 doctors and qualified nurses. The patients (9) were scripted for volunteers from our Patients as Educators (PaE) database. All the clinical problems were proposed by Foundation doctors to represent common problems encountered on a ward. Nursing staff provided support/distractions as required by the script and ran the timings of the scenario. This included being able to bleep a doctor or ring switchboard.
3 “F1” doctors were in the scenario simultaneously and received the initial handover together from an F1 who was leaving after a night shift, and then informed of the impending Registrar ward round in 45 minutes. Each “F1” was then left to decide on priorities from their list of tasks to complete.
Nursing students utilised the wards for their own preparedness goals and enhanced the inter professional environment. The Registrar ward round ended the scenario, answering any clinical questions the “F1”s may have had. A facilitated debrief discussion, working to guidelines, with a senior clinician followed to highlight common difficulties with doing the job and areas to work on in the remainder of their Assistantship.
A pre and post experience questionnaire was completed with questions on preparedness utilising a Likert Scale of 1-10. The post experience questionnaire also asked 2 free text general questions.
Longer term impact is being evaluated at the present time by a further questionnaire after 5 months in post.

Results:
Of the 240 students in the final year cohort 203 attended and we have pre & post questionnaire responses for 95% and 98% respectively.
100% of respondents stated that the experience had increased their perceived preparedness for F1. Early analysis, using a paired t test, of the mean results for all areas investigated (prescribing, unwell patient, handover, phone communications and speaking to relatives) showed a statistically significant increase in perceived preparedness (p<0.01).
Common Foundation related concerns in the free text boxes were decision making (26%), prescribing (23%) and making mistakes (23%).

Discussion:
WISE offered a realistic experience of a ward environment. The fidelity of the experience being down to excellently prepared scripts, our volunteer patients creating the ward atmosphere and the multi professional team and students creating a high level of activity. The few clinicians involved in running the scenarios ensured continuity of provision.
Preparedness for practice has proved difficult to conquer and this research adds to the evidence in the value of encouraging a student to realise the sense of responsibility that comes with the role and the requirement to work in the imperfect world of the ward. (1 2 3)
The students valued the simulation highly with several saying it was the best thing they had done at Medical School. The attendance rate increased over time. However, there were still over 30 students who did not attend for a variety of reasons. The determination to neither assess or record the scenarios helped with engagement of the more cautious students.
We hope the final questionnaire will help evaluate if this is “Preparedness in anticipation of Practice” or “Enhancement of Preparedness for Practice”

References:
1) UK Medical Graduates Preparedness for Practice: Final report to the GMC. L. Monrouxe 2014
Background:
Communication skills are essential to good medical practice. Numerous models exist for consultation skills teaching and the University of Bristol medical school has, over many years, employed the Cambridge-Calgary guide to good effect (1). In the lead-up to the launch of an innovative undergraduate curriculum we took the opportunity to re-evaluate our delivery of consultation skills teaching. We elected to create a new consultation model to extend what is offered by Cambridge-Calgary. We wanted a model with enhanced visual impact, which acknowledge the centrality of clinical reasoning and the circular, rather than linear nature of the consultation. We also wanted to emphasise the importance of activating patient self-care and the space for reflection between consultations. ‘COGConnect’, which remains true to the consensus statement released by the UK Council for Communication Skills Teaching (2) is what emerged. The purpose of this paper is to explain the thinking behind COGConnect, how it was designed and preliminary findings from its application in practice.

Methodology:
The Bristol model COGConnect was informed from close examination of the research evidence behind existing consultation models and the literature on whole person assessment, critical reasoning and motivational interviewing. A panel of experts met including communication skills leads, interested parties from the University of Bristol medical school and David Pendleton, Professor in Leadership. Once a consensus had been reached about the core concepts of the model, graphic designers inspired a dialogue about the appropriate visual representation of the model to create an accessible tool.

Results:
A new Bristol-devised consultation model COGConnect presents the consultation structure and content in an accessible. Cogs are used to represent the consultation in a 9-stage model. Each tooth of the cog representing a different phase (preparing, opening, gathering, formulating, explaining, activating, planning, closing and integrating). The ‘formulating’ stage makes specific reference to clinical reasoning. Students are encouraged to reflect on how they might activate patient self-care and there is an emphasis on shared decision making with the ‘patients’ cog interacting with the doctors. The final stage moves beyond a shared management plan and closure of the medical interview towards ‘integrating’ the consultation within the medical record and encourages the student to reflect on the educational opportunities within that consultation. The cogs can spin backwards and forwards to illustrate the iterative nature of the consultation. The axe which provides the central force on which the cogs turn is comprised of the 5 C’s (Compassion, Curious, Critical, Creative and Collaborative) of effective consultation. There are also more advanced versions with different cog sizes and spinning speeds can develop to represent to complexities of difficult consultations.

Discussion:
Initial utilisation of the COGConnect model has gained positive feedback from students and the medical faculty. It provides a clear visual representation of the consultant process and aligns with the students effective consultation skills teaching. The additional elements of explicit clinical reasoning, patient self-activation and reflective integration of the consultation encourages our students to become mature clinical consulters. This model moves from teaching consultations in a process driven manner to focusing on students attitudes, values and beliefs and the importance on the shared, iterative process with the patient.

We would like to present this model and facilitate discussion about its utility within medical education.

References:

Ref: 279, Board: A8
Communication Skills training at Medical School: What do F1 doctors really think?
R Anderson, N King, P Fletcher
Gloucestershire Hospitals NHS Foundation Trust

Background:
Communication Skills training at Medical School is mandatory. There is clear evidence that good Communication Skills improve patients’ experiences and outcomes. In view of this, guidance has been published to assist syllabus planners with the design and provision of communication curricula. This study was designed to gauge current Foundation Year 1 (F1) doctors’ thoughts regarding the Communication Skills training they received as medical students.

Methodology:
A standardised, online questionnaire was sent to all F1 doctors working at Gloucestershire Hospitals NHS Foundation Trust. They were asked the following questions: 1. Which Medical School did you attend? 2. What were your experiences of Communication Skills teaching as a medical student? 3. How did the teaching make you feel? 4. Did you enjoy it/find it useful? 5. How could it have been improved? Their responses underwent thematic analysis and conclusions were drawn regarding F1 doctors’ views of Medical School Communication Skills training.

Results:
21 F1 doctors, from 13 Medical Schools, responded to the questionnaire. One doctor stated that they had received no Communication Skills teaching at Medical School. The remaining 20 listed a combination of lectures, small group discussions, reflective essays, simulated scenarios and filmed consultations as part of their communication curricula. There was a spectrum of responses relating to the volume and frequency of training. Some F1s had weekly Communication Skills training throughout Medical School, whereas 3 doctors stated that they had not received teaching beyond the third year.

9 F1s said they had enjoyed their teaching and 17 felt it had benefited them. In general, practical sessions were deemed the most useful, especially when they were filmed and involved actors or real patients. Conversely, 5 students stated that the teaching had felt unrealistic and contrived, and 4 said that they had found their experiences nerve-wracking or stressful.

Discussion:
In this study, most F1 doctors had a positive attitude towards their Communication Skills teaching. However, one doctor stated that Communication Skills teaching was not useful as she felt communication was ‘common sense’. This aligns with studies showing that students who believe they are good communicators often have negative attitudes towards Communication Skills training. Most doctors felt they gained more from contextualised simulation, which is in agreement with other studies.

It is of concern that one F1 did not identify any Communication Skills training, and several only received training in the first few years of Medical School. Studies have shown that students’ ability to communicate can deteriorate during training as they begin to focus on fact-finding rather than maintaining an empathetic approach. In addition, 20% of the students found their experiences of Communication Skills at Medical School “stressful” or “nerve-wracking”, stating that this distracted from their learning experience.

It seems that there is still heterogeneity in the implementation of Communication Skills training at Medical School. More emphasis should be placed on standardising the delivery and quality of Communication Skills training, whilst also removing potential stressors that can influence student experience and learning. Additionally, future studies should look not only at how we teach Communication Skills, but how it can be reliably assessed in a summative manner.

References:

Ref: 085, Board: A9
Difficult conversations: How does Communication Skills training affect the confidence of F1 doctors?
R Anderson, N King, E Moseley, J Watson, P Fletcher
Gloucestershire Hospitals NHS Foundation Trust

Background:
Every day junior doctors are required to engage in challenging conversations with patients and relatives. Poor patient-doctor communication has been shown to lead to patient dissatisfaction\(^1\) and consequently to complaints and litigation\(^2\). The Foundation Programme Curriculum states that all Foundation Doctors must demonstrate good communication skills\(^3\). In spite of this, there is lack of emphasis on graduate Communication Skills training and many NHS Trusts do not include it in their Foundation Teaching Programmes. This study was designed to assess whether Communication Skills training can increase the confidence of Foundation Year 1 (F1) doctors with regard to end of life discussions and breaking bad news.

Methodology:
A 3-hour, Communication Skills teaching session was designed and delivered to F1 doctors at Gloucestershire Hospitals NHS Foundation Trust. It consisted of small group work discussing approaches to a variety of challenging communication scenarios, video-critique of a poorly conducted consultation using a validated communication assessment tool\(^4\) and a carousel of role-plays (using actors) with immediate debrief and feedback. The F1 doctors were asked to self-rate their confidence on a scale of 1 (not confident) to 5 (extremely confident), before and after the session, and to provide qualitative feedback regarding its usefulness.

Results:
17 F1 doctors provided feedback both before and after the teaching session.
Prior to the teaching session, confidence self-ratings with regard to discussing end of life decisions ranged from 1 to 5. 1 rated 1, 7 rated 2, 7 rated 3, 1 rated 4 and 1 rated 5 (Mean 2.65, Median 3). After the session, the self-ratings ranged from 3 to 5 (5 rated 3, 9 rated 4 and 3 rated 5 (Mean 3.88, Median 4).
Prior to the teaching session confidence ratings with regard to breaking bad news ranged from 1 to 4 (1 rated 1, 8 rated 2, 5 rated 3 and 3 rated 4 (Mean 2.59, Median 2). After the session, the self-ratings ranged from 3 to 5 (4 rated 3, 9 rated 4 and 4 rated 5 (Mean 4, Median 4).
All F1s evaluated the teaching session as ‘very good’ or ‘excellent’ and commented that they found the use of ‘real-life scenarios’ and ‘role-plays with immediate feedback from more senior doctors’ particularly helpful.

Discussion:
There is little, and inconsistent, evidence to show that Communication Skills training leads to an improvement in communication skills\(^5\). Although limited by size, this study suggests that delivery of graduate Communication Skills teaching to Foundation doctors results in an increase in confidence with regard to delivery of bad news and end of life discussions. In addition, it appears that case-based teaching and use of role-play is considered the most useful method by which to deliver this training.

Initial self-rating confidence scores were generally quite low amongst the cohort. This implies that F1 doctors feel underprepared and inexperienced in this area. Surely more emphasis should be placed on teaching Communication Skills in order to prepare F1 doctors to conduct these challenging, yet common and crucial conversations. In addition, more research is needed to establish whether Communication Skills teaching leads to a quantifiable improvement in communication, and how best to measure this.

References:

Ref: 083, Board: A10
Interns’ perceptions of the importance of “soft skills” in clinical practice in India
JL Anderson, K Nainen, R Desu, S Bhat, N Reddy, S Sateesh, S Mada, J Anderson
Brighton & Sussex Medical School

Background:
Communication skills are now essential component of Indian medical curricula. However, little is known about Indian interns’ perceptions of importance of “soft skills” in clinical practice. The study aims to explore interns’ perceptions of significance of soft skills in clinical practice.

Methodology:
This was an observational, cross-sectional study in the form of a small survey of a random sample of interns at Narayana Medical College. It used a brief, structured, interview- administered questionnaire. Out of a cohort of 100 interns, 40 were randomly selected from the intern lists and invited to participate.

Results:
The participants were 40 interns working at Narayana Medical College. They ranged in age from 22-24 years with a mean age of 22.77. Most participants, 26 (65%), were female and 14 (35%), were male.
All the participants said that Communication skills are very important for doctors in clinical practice. 88% of the interns said that they had not received Communication skills training and the 12 % who said they received some training reported that it was not structured. 95% said that they would like to learn Communication skills and 97% strongly felt that they should be included in medical training. While 27% of the interns said they feel confident in consulting with patients independently, 50% said they are not confident. About half (50%) said that they are confident in leading a team and breaking bad news.

Discussion:
This is the first study in India to explore interns’ perception of “soft skills” in clinical practice. Interns perceived Communication skills as significant and said they take up opportunities to acquire competence in them. This is a small study and further large-scale, multicenter research is required to validate this study’s findings.

Recommendations:
From this study, these authors gleaned four recommendations for medical education:
1. Although the study clearly highlighted the significance of Communication Skills in clinical practice, further studies are needed to validate the findings.
2. Communication Skills training should be an integral part of any medical curriculum.
3. Medical educators might consider skills centres or simulation centres as a resource for teaching and learning soft skills.
4. Faculty, who teach soft skills, should receive additional training and systems should be put in place to acquire relevant skills for educators.

References:

Ref: 315, Board:A11
Acting like a doctor: oral case presentation for medical students
N Gill, D Murphy, A Coombs, J Fukuta, T Reynolds, R Rooney, J Morgan
North Bristol Academy

Background:
Verbal communication is both an important element to the clinical practice of doctors and an integral part of undergraduate medical education. The oral case presentation (OCP) is one method often used in professional verbal communication and remains commonplace in the ward round, clinic and outpatient settings. In addition to its implications in professional practice, the OCP has a multifaceted role in undergraduate teaching, playing a significant part in allowing students to demonstrate their initiation to their new community of practice, as well as facilitating and checking acquisition of knowledge. Current OCP teaching is often on an ad hoc basis. Respecting the complex role that the OCP plays in undergraduate medical education, we set out to create structured, dedicated teaching on this topic.

Methodology:
We designed a method of teaching students about the OCP taking into account reasoning, rhetorical and linguistic mechanisms, through a duet of workshops focused on the content of the OCP and a drama-based rhetoric workshop delivered by a trained theatre actor, director and teacher. This course was delivered to 45 pre-clinical, undergraduate medical students at our institution. As a primary outcome, students were assessed objectively on their OCP’s at weekly intervals for three weeks by trained faculty. A paired t-test was performed to determine if the curriculum was effective in increasing the oral case presentation score. As a secondary outcome students’ confidence was assessed using Likert scales.

Results:
An overall mean score improvement (M=20.3, SD 14.6, N=45) was significantly greater than zero, t (44) =9.3, two tail p 0.05, providing evidence that the curriculum was effective in increasing overall presentation scores. A 95% confidence interval around the mean difference in score was 15.9-24.7. Likert confidence scores for both non-verbal and verbal elements of the OCP improved over the course of the curriculum.

Discussion:
This curriculum based approach led to an objective improvement in OCP scores and increased our students' confidence with this modality of communication. Consideration should be given to incorporating dedicated structured teaching of the OCP for undergraduate medical students and this course has already been adopted by our institution.

Ref: 098, Board: B1
Effective consultation teaching within a new curriculum
E Grove, T Thompson, J Buchan, L Grove
University of Bristol

Background:
Learning to consult in the clinical setting is an essential component at all medical schools and the GMC provides overarching objectives in the document Outcomes for Doctors. However, there is a vast spectrum of how clinical consultation is integrated and delivered within medical curricula. At the University of Bristol Medical School, consultation teaching traditionally focused on whole case role play and clinical learning. In the development of our innovative undergraduate curriculum we took the opportunity to re-evaluate delivery of learning opportunities for consulting. We believe students deserve an undergraduate course which provides cohesive learning of clinical consultation, incorporating clinical reasoning, clinical communication and clinical skills, through all years of medical school, and which meets the requirements in the consensus statement released by the UK Council for Clinical Communication Skills Teaching (1). The purpose of this paper is to explain the development of this new clinical communication course, Effective Consulting (EC), and provide preliminary findings from its application in practice.

Methodology:
An initial literature review was performed on consultation models, critical thinking, clinical reasoning and motivational interviewing. An Effective Consulting working group comprised of doctors, academics, psychologists and communication specialists worked together to integrate Clinical Consultation learning into the new curriculum.

Results:
An Effective Consulting course has been created as a new strand within Bristol curriculum. It builds on Bristol’s teaching of consultation and clinical skills, and draws on our award winning Whole Person Care course. The key elements are integration of clinical consultation teaching throughout the entire medical curriculum, explicit clinical reasoning, uniting clinical consulting theory with practical experience and formative assessment engaging the medical arts and humanities.

The EC course is delivered as an integral part of Case Based Learning for students, with a day per CBL fortnight dedicated to EC. The EC day comprises a half day of EC Labs (so called to reflect their ‘theoretical and practical nature’) and a half day of clinical contact. EC Labs comprise of interactive lectures and small group sessions, facilitated by both hospital doctors and general practitioners. Distinct features of this course include an students developing an understanding of clinical reasoning, the promotion of self-care for both patients and their doctors, and the integration of ‘content’ and process in clinical communication. The EC course is a helical theme and is present through all five years of the curriculum. The theme comprises three closely interrelated domains: Clinical Reasoning (head), Clinical Communication (heart) and Clinical Skills (hands). Students will learn Clinical Reasoning though consideration of their own cognitive bias and will develop understanding of diagnostic probabilities. In addition they will cultivate high-quality communication with patients and colleagues which align with the Bristol COGConnect model. Clinical skills are developed throughout the course both in terms of the tools for formulating and integrating a well-rounded medical history and performing clinical examinations.

The assessment of the EC course is formative in years 1 and 2 including the students keeping a reflective diary, completion of a Team Assessment of Behaviour (TAB) and a creative reflective assignment. Assessment becomes summative in the clinical years through ISCEs and mini-CEX or CBD assessments.

Discussion:
This is the first year the Effective Consulting course has run and the half way review has received positive feedback from both students and staff. We will present the process of a new Effective Consulting course being developed, lessons learned from its first year in practice and facilitate a discussion on the future of clinical consultation within medical education.

References:
Google to the Rescue! Harnessing the power of Google Maps to profile, clarify and recruit to GP Placements in a UK medical undergraduate programme.
S Thornton, T Thompson
University of Bristol

Background:
In September 2017, a new medical undergraduate curriculum was introduced at the University of Bristol Medical School, including a three-fold increase in the amount of teaching delivered in general practice. Consequently, we have launched a recruitment campaign to try and increase the number of practices in the region that teach medical undergraduates.
The footprint of the University of Bristol covers 337 general practices in the South West of England. Through this project, we aimed:
1. To identify which practices in the university footprint are not teaching medical undergraduates, in particular, identifying towns where we should focus our practice recruitment efforts
2. Enable us to visualise the success of our recruitment programme
3. To create a geographical database of practices to help the development of teaching ‘clusters’

Methodology:
We used Google Mapping software to create an interactive geographical database of all the practices in the footprint of the University of Bristol, including information such as practice list size, and what academic years the practice has taught. Different information can be overlaid onto the map by toggling different layers.

Results:
As a result of this work we were able to create a visual map of all the practices on our footprint and identify areas of strong representation and areas where a targeted recruitment campaign was warranted. We will present how we have used Google Maps to develop our database and demonstrate how it has been of use to us in planning our teaching practice recruitment and placement planning.

Discussion:
This information will be of use to others involved in the development and administration of community placements.
How to integrate and embed global health in medical curricula to create global doctors: a case study from Newcastle University Medical School

TA Deivanayagam, R Walker, S Jones, D Kennedy, K McKeegan
Newcastle University

Background:
The importance of sound global health education (GHE) in producing tomorrow’s doctors is well documented (1). The Lancet report on Health Professionals for a New Century calls for GHE which creates a workforce sensitive to an increasingly diverse patient population, and able to take action on public health (2). Medical students’ desire to learn about global health is also well documented: a survey of 500 medical students from 75 countries found that 94% believed GHE was important, yet only 33% felt teaching was sufficient (3). GHE involves equipping individuals with the right attitude and awareness of risks, technologies, politics, transnational flow of diseases and other factors influencing the health of different populations across the world (4). However, the structure of content and methods for delivery in medical curricula are less clear. Since the definition and role of global health continues to evolve in an increasingly globalised world (5), delivering good quality teaching on a dynamic, socially derived concept poses a challenge unique to this subject. Core compulsory GHE at Newcastle University Medical School currently includes lectures and seminars on public health and epidemiology in first, second and fourth years. Optional teaching includes a 6-week long student selected component (SSC) on global health for fourth year medical students with rapidly increasing popularity since 2007 (6). The current reform of the Newcastle curriculum brings the opportunity to document and reflect on the experience of embedding global health in a medical curriculum to create the global doctors that we need in today’s world. This study focuses on the practicalities of the integration process.

Methodology:
A retrospective case study on delivering GHE, which includes qualitative data through surveys from a curriculum steering group and comparisons with GMC standards for medical education and training (7). We comment on the following aspects of education: curriculum structure, methods of delivery and content. Curriculum structure refers to the time during which course content is delivered and duration of delivery. Methods of delivery refer to lectures, seminars and self-directed learning. Content refers to themes to be covered based on existing recommendations from stakeholders (8). Data will be categorised by year group and labelled as core, optional or pre-elective GHE, as per the Lancet Global Health Learning Outcomes Working Group (8). The change in curriculum structure will lead to a shorter SSC lasting 4 weeks in 2019, therefore the SSC will be evaluated to assess adaptation to the new structure. Teaching in first and second years will shift from a modular to case-led approach therefore a list of GH learning outcomes paired with relevant cases will be created. A reflection of human factors involved in curriculum planning will also be documented through surveys from members of the board of medical studies.

Results:
The initiative began in December 2017 therefore results will be available to present at ASME 2018. In terms of content and curriculum structure, we expect pre-elective teaching with a focus on safety and ethics to continue to be delivered in third and fourth year. Moving from modular to case-led learning will result in the generation of learning outcomes suited to specific clinical cases with attached online resources. In terms of human factors, the current involvement of a recent Newcastle graduate in steering curriculum mapping alongside members of the board is in line with GMC standards.

Discussion:
Overall, fellow institutions around the UK will benefit from reflections on the practicalities of creating an integrated approach GHE. We have a valuable insight into suitable clinical cases where learning outcomes related to global health may be embedded. If global health is well integrated in medical curricula, tomorrow’s doctors may be more likely to take the holistic approach towards global health we need in an increasingly globalised world.

References:


Ref: 271, Board:B4
Reflecting on Reflection; Examining Students’ Views of the Nature and Role of Reflective Practice

A Lawrence, E Yoo, L Johnson, N Gostelow, F Gishen
University College London Medical School

Background:
Reflection is an active process occurring before, during and after situations to develop a greater understanding and to inform future encounters. The General Medical Council (GMC) recommends all doctors adopt reflective practice. As such, reflection is intrinsic in both under- and postgraduate curricula. As well as influencing future practice via Kolb’s Learning cycle, reflection can help develop the therapeutic relationship, professional practice1 and resilience2. It is imperative therefore that students develop good reflective practices early on.

A recent feedback poll of 296 medical students at University College London Medical School (UCLMS) across 5 years of study showed 76% found small group work to be the most helpful method of reflection. Only 9% of students found written assignments, which form the majority of reflective assignments at UCL, to be useful.

The aim of the project was to improve medical students’ engagement in reflection through better alignment of reflective activities to students’ learning preferences and needs.

Methodology:
This was student-staff collaborative mixed-methods research. Students in their penultimate year, who had been exposed to all methods of reflection at UCLMS, were invited to take part in a voluntary questionnaire and focus group.

The questionnaire used The Self Reflection and Insight Scale (SRIS) to assess reflective ability and Likert score questions rating different methods of reflection.

Participants then attended a student-led focus group to further explore their attitudes to reflection.

The focus group was transcribed and independently analysed thematically by two researchers. Sub-themes were collated and discussed as a research group before themes were finalised.

Results:
11 students answered the questionnaire and participated in the focus group.

Likert scale responses revealed students preferred Schwartz Round3 as the most useful means of reflection, followed by Small Group Work then Balint Groups4. Students found written assignments were least useful.

Thematic analysis of the focus group revealed overarching themes of ‘Engagement’ and ‘Format’.

Detailed analysis of the questionnaire and focus group will be presented.

Discussion:
A key outcome of this project was the ability to co-design the reflective curriculum to better reflect student preferences and needs, with overall improvement in the students’ experience.

The project produced useful recommendations applicable to all students which are now being implemented and evaluated further. With emphasis on the role of students in these changes, we hope to increase their overall sense of belonging and ownership over their curriculum. The project continues into this academic year to evaluate how these changes effect engagement with this important professional skill.

References:
4. A very short introduction to Balint groups [Internet]. Balint.co.uk. Available from: https://balint.co.uk/about/introduction/
The role of the Foundation Year 1 doctor on night duty. Implications for education.
D Murphy, J Morgan
North Bristol Academy

Background:
Students generally look upon their future night duty work with trepidation. It marks a large step from undergraduate student to qualified doctor. Adequate training for this poses a challenge for medical educators. Given the evolving nature of medicine and the expanding roles of advanced nurse practitioners, understanding the tasks currently carried out by foundation year 1 (FY1) doctors is vital to ensure such teaching remains relevant. Little is known about the reality of the work undertaken by foundation year one doctors on call at night. This paper details the requested tasks to better facilitate both undergraduate and postgraduate education.

Methodology:
This descriptive observational study took place in Southmead Hospital (North Bristol Academy) an 800-bed tertiary referral hospital. The University of Bristol School of Medicine conduct a module, ‘preparing for professional practice’ (PPP), for final year medical students. This module requires shadowing of a foundation year 1 doctor on call overnight. Each student documented the individual tasks the FY1 was requested to do on night duty. The tasks were subdivided into direct tasks (directly involving a patient) or indirect tasks (not directly involving the patient). Descriptive statistics were used to analyse the data.

Results:
The study included a total of 432 medical on call hours and 228 surgical on call hours. The average number of requested tasks were 24/night for medicine and 20/night for surgery. Made up of 37% direct care and 63% indirect care for medicine and 60% direct care and 40% indirect care for surgery. Overall for medicine the most frequently requested tasks were: (i) ‘chasing’ blood results (ii) ‘chasing’ CXR (chest x-ray) results (iii) ‘chasing’ CTH (computed tomography head) reports (iv) conducting a fluid balance review (v) reviewing an ECG (electrocardiogram). The most frequently requested tasks for surgery were: (i) Admitting a patient (ii) phlebotomy (iii) ‘chasing’ blood results (iv) inserting an intravenous cannula (v) prescribing analgesia (v) prescribing intravenous fluids.

Discussion:
There are clear distinctions between working in a medical or surgical role on call at night. The medical role requires greater indirect care with particular relevance given to the interpretation of results. There is an opportunity for educators to focus on teaching both the interpretation of results but also the actions that may need to be taken whilst on call. Of the direct medical care, 35% of requests for a patient review were based on observations (e.g. blood pressure) and only 13% for symptom based complaints (e.g. chest pain). This is perhaps in contrast to the current symptom based approach to medical education. Of the patient reviews that were requested due to abnormal bedside observations the most frequently quoted abnormality was that of an elevated National Early Warning Score (NEWS) rather than a single observation. Surprisingly procedures only represented 8.6% of the total tasks requested and 3 (Arterial blood gas, venous blood gas and phlebotomy) represented 96% of all procedures on medicine. This provides a clear focus for skills training and reassurance. Results from the surgical on call also highlighted areas for targeted teaching. The 5th most common reason for patient review on surgery was a fall. This is a common complaint on call and one which often has specific documentation required by the trust, an area which the student would likely not be familiar with. Of the requests for a surgical patient review that were symptom driven, ‘abdominal pain’ represented 46%. A knowledge of analgesia was also high yield. This study attempts to provide guidance for a practical targeted approach to on call night duty to better facilitate both undergraduate and postgraduate education.

Ref: 024, Board:B6
The teaching skills curriculum for the undergraduate medical curriculum: a Modified Delphi study
L. Ghani, A. Abdulrahman, N. Salooja
Imperial College London

Background:
There are many potential benefits to teaching medical students to teach (1) and this is endorsed by the GMC which has recommended that all undergraduate medical students be taught how to teach (2). A study in 2013 indicated that the majority of medical schools in the UK offer some form of teaching skills training (3) but a national curriculum does not currently exist. There have been a variety of changes in postgraduate training in the UK which may have affected the ideal education skill set required for junior doctors. We therefore aimed to identify key requirements for a teaching skills curriculum involving both senior educators (SE) and junior doctors working as clinical teaching fellows (CTF).

Methodology:
We used an online modified Delphi technique. 44 teaching concepts and principles were selected from the literature (4) and participants were invited to add additional items and then to rate teaching principles and concepts based on level of importance as follows: 1= must include, 2 = should include, 3 = could include and 4 = exclude. Two rounds of ranking were conducted at which point there was good consensus for the top 26 items.

Results:
Items included a mixture of theoretical principles and practical experiences. There were 12 participants for round 1 (6 SE & 6 CTF) and 11 for round 2 (6 SE & 5 CTF). Learning the theory of reflection was considered to be essential by all participants (rating 1.0 and rank 1). Other high scoring items (rating 1.5 or less) in order were: theoretical models of feedback, delivering feedback, practising developing objectives, lesson planning, importance of goals and objectives, evaluation, reflective work, Kolb’s reflective cycle, structuring teaching, teaching a practical skill, presentation skills. Items on assessment were ranked relatively low. The only item rated >3 was research methodology. There were some substantial differences between SE rankings and that of the CTFs. In particular the latter ranked theory and practice of evaluation lower (13,24), Kolb’s reflective cycle lower (18) and presentation skills teaching lower compared to SE (5,5, 5,5). Conversely SE ranked Blooms taxonomy, small group facilitation (17,17) and self regulated learning (39) lower compared to CTF (4,4,2).

Discussion:
The highest scoring items were linked to reflection and feedback which reflects modern GMC and postgraduate training requirements (2). Items linked to assessment were ranked relatively low (17,17, 24, 37, 44, 47) despite its educational importance in driving learning. These data are in keeping with the clinician educators who responded in McLeods et al. (4) delphi process. The low ranking of evaluation by CTF rather than SE may reflect the comparatively lower number that had completed teaching skills training. Conversely the low ranking of presentation skills by CTF may indicate the changing skill set of students before they enter university. We conclude that a Delphi process can be a useful way of developing a modern-day curriculum using relevant stakeholders.

References:
2. GMC. General Medical Council (GMC). Good Medical Practice 2013.

Ref: 239, Board: B7
Ward Cover 101: On-call simulation for medical students
W Gatfield, C Rowden, E Trevor-Jones, E Britton
Bath Academy, University of Bristol

Background:
The GMC’s National Student Survey has historically revealed that a significant portion of medical students do not feel adequately prepared for their first foundation post, and that an increase in hands-on experience throughout medical training would improve this (1). A BEME systematic review concluded that medical simulation-based training is educationally effective (2) and simulated on-call sessions have been shown to help prepare medical students transition to junior doctors (3). Simulated on-call training has been delivered at the Royal United Hospital, Bath in various forms since 2014 (4). Paper-based scenarios on hospital wards were previously shown to be as effective at increasing confidence in dealing with being on-call as the more resource-intensive actor-based sessions (5). We plan to further develop the on-call simulation training, seeking to formulate a structure that can then be formally adopted into the University of Bristol curriculum.

Methodology:
We will recruit 36 Final Year medical students from the University of Bristol to be involved in on-call simulation teaching during their placement at Royal United Hospital, Bath. Sessions will involve six students participating in an array of paper-based exercises on the hospital wards, which reflect common scenarios that are experienced on a ward cover shift. Sessions will start and finish with a simulated handover and a facilitator, acting as a senior doctor, will be on hand to provide advice via a bleep system. Mock-up medical notes and drug charts will be provided which will then be reviewed in a debrief session after the simulation in order to help extract learning points from the scenarios. Each session will last for two hours – one hour for the simulation and one hour for the debrief. We will use pre- and post-simulation questionnaires to assess whether the students felt the on-call simulation improved their confidence in handovers, communication, escalation and task prioritisation. Free textboxes will be used to capture further qualitative data. We will also perform short focus groups after each session to garner feedback on how the session might be improved.

Results:
We will analyse the questionnaire results, comparing pre- and post-simulation confidence scores and use the unpaired Student’s T-test to determine if there is a statistically significant improvement. We will also thematically analyse the qualitative data gained from the questionnaires and focus groups to identify key themes about what worked well and how the session could be improved.

Discussion:
We will draw conclusions based on our results, and intend to use the data to guide the development of on-call simulation training for medical students and the format in which it is best delivered. We aim to promote the use of on-call simulation as a formalised training tool within medical schools.

References:
You said, we did: Responding to medical student evaluation feedback to enhance arterial blood gas teaching.
University College London Medical School - Royal Free Hospital Campus

Background:
Arterial Blood Gas (ABG) sampling is an important and common clinical skill. The General Medical Council list it as a core procedural skill for provisionally registered doctors1.

There is a paucity of medical education literature regarding how this key clinical skill is, or should be, taught. From the authors’ experiences, there is significant heterogeneity between and within UK medical schools.

Qualitative retrospective online feedback from the previous academic year’s equivalent cohort (2016/7) of fourth year students (n=68) at a London teaching hospital suggested that the ABG teaching was too informal, too late in the academic year and they were concerned about causing patients pain. Only 7% of students reported feeling confident performing ABGs. 65% had attempted an ABG on a patient and only 47% of these attempts were successful. Lack of training was frequently ranked as a main limiting factor to performing ABGs on patients.

We therefore sought to re-design, implement and then re-evaluate a structured teaching programme to address these shortcomings and provide a "bridge"2 to the clinical setting. The overarching aim was for students to perform greater numbers of ABGs on patients and in a safer and more effective way, ultimately improving patient safety and experience.

Methodology:
83 fourth year students on acute medical specialty placements within a London teaching hospital were taught on a re-designed multi-faceted three-part teaching course.

Prior to clinical exposure, an introductory interactive tutorial covered the theory and clinical context then led into a demonstration and supervised mannequin-based clinical skills practice. Secondly, a less formal “drop-in session” allowed further practice. Finally, a re-cap session at least one month later integrated video-demonstration with further practice in the clinical skills suite.

To ease anxiety about causing pain and to improve patient experience3, students were specifically taught the 2017 guidelines: “local anaesthesia (LA) should be used for all ABG specimens except in emergencies”4.

The students’ progress was measured compared to the previous year’s cohort. Anonymised questionnaires were completed at monthly intervals to capture four key parameters which were then statistically analysed:

2. Confidence of performing ABGs using a 5-point Likert Scale.
3. Perceived main limiting factor to performing ABGs using a ranking question.
4. Numbers of attempted and successful ABGs on patients.

Results:
1. 99% of students remembered the LA guidelines at 12 weeks, compared to 82% of last year’s cohort (p<0.05).
2. On a 5-point Likert scale, the mean confidence rating was 3.0, compared to 2.2 last year (p<0.05).
3. 3.6% of students rank “lack of training” as the main limiting factor for performing ABGs on patients, compared to 33% last year (p<0.05).
4. The proportion of students who had performed ABGs on patients was 7.1% at 4 weeks, 21% at 8 weeks, and 44% at 12 weeks. This upward trajectory is due to surpass last year’s end-of-year score of 65% within 16 weeks. 56% of ABG attempts were successful, compared to 47% last year (p<0.05).

Discussion:
Following implementation, medical students felt more confident and more formally trained. They were more knowledgeable about the need for LA, improving patient experience. This resulted in students performing ABGs on patients in projected greater frequency and with more technical success, enhancing real world practice and patient safety.

This improvement was achieved by specifically designing the programme in response to previous feedback. The course was formalised and structured with repetitive skills-based learning, using a range of educational tools. Alongside “what” students are taught, the focus shifted to “when” and “how” they are taught.

This approach to micro-curriculum design can be applied to other clinical skills in both undergraduate and postgraduate education to positive effect.

References:

Ref: 353, Board: B9
You've got to have Faith: Should faith have a role in medical education?
J Shenouda, M Cooper
Brighton & Sussex Medical School

Background:
Even in today’s “global village”, worldwide most people report practising a religious faith. In the UK, despite falling numbers of believers, there is increasing diversity in faiths expressed. Religious beliefs can impact key health-seeking behaviour, for example healthcare access and medication adherence [1]. Surprisingly, faith as a determinant of health is rarely explored in medical curricula. As such, we sought to address this gap by piloting a session dedicated to faith and health.

Methodology:
An interactive, 90 minute seminar was undertaken with eleven postgraduate healthcare students exploring the landscape of major world religions and associated health beliefs/practices. The session also introduced students to Kleinman’s theoretical model of cultural health systems [2]. “Ground rules” were introduced to promote a safe environment for open discussion. A short introductory presentation was followed by small group discussion and interactive case studies of religious minority groups. Verbal consent was obtained prior to the session for pre- and post-seminar questionnaires.

Results:
The pre-seminar questionnaire elicited that all eleven participants described faith as important to practising healthcare and only two had had previous teaching on faith in the health context. Seven students reported a desire to consider cultural and religious barriers to healthcare, with four calling for teaching to explore the impact on health of gender inequalities perceived to exist in certain faiths.
Following the session, six students reported that Kleinman’s model was a useful tool to interpret the impact of faith and culture on health practices. One student reported that the session offered “time to reflect on this important issue”. Despite being a potentially divisive topic, four students suggested that future seminars would benefit from more time to facilitate deeper discussion.

Discussion:
Our evaluation suggests there is a lack of medical teaching in faith and health and that this field is not just acceptable but also desirable. Adopting a theoretical model provided a framework to contextualise case studies with routine clinical practice. However, most students conflated faith with “culture” perhaps because Kleinmann’s model fails to distinguish between these two. We now believe faith should be considered in medical curricula as a related but independent determinant of health. Feedback underlined the importance of including atheism with such teaching. Although not reported in feedback, we recognize that our teaching would be strengthened by session leaders from diverse faiths.
This well-received seminar has resulted in timetabling of ongoing faith and health teaching into an undergraduate medical curriculum, with the aim of expanding teaching on further postgraduate healthcare courses. Future sessions will focus on how healthcare professionals can work with religious institutions to promote communication about health and challenge cultural stereotypes.
Ultimately, we have learnt that both students and healthcare professionals perceive a benefit from greater understanding of the impact of faith on health. So let’s talk about faith.

References:
Fair assessment: creating a bespoke equality & diversity e-learning module for postgraduate examiners

A Liiv
MRCP(UK)

Background:
The annual MRCP(UK) census identified that examiners were having difficulty completing equality and diversity training, an essential criteria for those making academic judgements in clinical examinations. Additional feedback indicated that examiners were either finding it difficult to complete this training or that local NHS provision was too generic to be useful to support participation in assessment. MRCP(UK) resolved to address this by developing a bespoke equality and diversity training package that would enable examiners to meaningfully fulfil this key criterion. An e-learning module was chosen as the platform for delivering this because of the resource required in providing face-to-face training to a large group of clinicians.

Methodology:
After conducting a review of the available literature and investigating existing best practice in the field, MRCP(UK) worked with a range of groups to create this package:

• A focus group of experienced examiners created a range of plausible scenarios based around the nine protected characteristics defined by the Equality Act 2010. This assisted in creating content designed to reflect clinicians experiences;

• These scenario outlines were adapted in to live action and animated videos for inclusion in the e-learning module;

• These videos were shown to different focus groups of examiners, and a discussion was facilitated by a subject matter expert to encourage examiners to reflect on the different courses of action available to them;

• The content of these facilitated discussions was used to create the key content within the e-learning module.

Results:
The full training package can be viewed online by MRCP(UK) examiner. It includes 16 scenarios that cover each of the nine protected characteristics, each of which is linked to specific learning points. The course content does not emphasise specific correct/incorrect answers. Examiners are required to reflect on what how they might react in different situations and think about their motivations in doing so. The module has been shared with senior examiners from the three physician colleges and piloted with a number of examiners. Initial feedback has been very positive.

Discussion:
MRCP(UK) has created this module as part of its work to meet GMC standards for assessment, specifically that equality and diversity training is a core component of examiner training. The module will assist examiners by providing a mechanism to fulfil this criterion with a minimum amount of time commitment (it takes around 45 minutes to complete).

We are also aware of the focus on differential attainment, and the role that unconscious bias plays in this, in medical education research. The e-learning module provides a public demonstration of MRCP(UK)’s commitment to practically addressing this issue, complementing the research that we have already conducted in the field and continue to support. It shows candidates the rigorous standards that prospective examiners are required to meet before they can undertake assessment.

Ref: 185, Board: C1
Globalisation of Paediatric Musculoskeletal Matters (PMM)
N Smith, S Jandial, R Wyllie, C English, B Davies, R Khubchandani, M Chan, J Munro, V Ferriani, C Magalhães, R Russo, J Yan, C Scott, S Charuvanij, K Khawaja, J Vojinovic, T Rapley, H Foster
Newcastle University

Background:
Paediatric musculoskeletal matters’ (PMM–www.pmmonline.org) is a free, evidence-based and peer reviewed open e-resource for paediatric musculoskeletal (MSK) medicine targeting non-MSK specialists [1-3]. Since launch (Nov-2014) PMM has reached 196 countries with >88,900 users, >268,000 hits. Users who have declared their training background on the website are mainly non-MSK specialists. Feedback from users has requested further content to reflect international healthcare systems. PMM India was developed in collaboration with the Indian Academy of Paediatrics (IAP; Sept-2015, >3,900 users, 16,800 hits to date) and showcases successful partnership with local clinicians in developing PMM with local context. Further ‘internationalisation’ is now underway with additional global partners to develop ‘PMM International’. Here, we describe the process for international development.

Methodology:
Paediatric rheumatologists in 11 countries around the world were approached to peer-review and identify additional PMM content to reflect paediatric MSK medicine in their health care systems (e.g., case mix, clinical presentations, care pathways), with a focus on knowledge relevant for non-MSK specialists. New content was developed by local teams identified by the paediatric rheumatologist(s) who then collated and provided expert overview before submission for editorial review. All contributions were provided in English. Additional cases and images were included with appropriate consent.

Results:
PMM International additions to the original website brings new content predominately focused on infections / infection-related disease with MSK features or as differential diagnoses for rheumatic disease. Most content is in English with requests for translation of some content (e.g., pGALS [4,5] which is available in 11 languages to date). PMM International will be further peer reviewed with open access to all. A PMM app is planned to facilitate access where internet capacity is limited.

Discussion:
Rapid globalisation necessitates appropriate e-resources with content that reflect international health care contexts. PMM International targets non-MSK specialist audiences to raise awareness and early recognition of MSK pathology. Our work reflects strong collaborative global partnerships within the paediatric rheumatology community. PMM has been endorsed by the Paediatric Rheumatology European Association (PReS) as an educational resource. Data thus far supports wide reach and positive uptake from the target audience user groups and more formal evaluation (i.e., change in knowledge, clinical practice) is planned.

References:
5. pGALS app available now on Apple and Google Play App Stores (V2 will have language translations).
Student evaluation of a sepsis e-learning package designed by undergraduate medical students
C Jefferies, C Kostov
Torbay and South Devon NHS Foundation Trust

Background:
Sepsis is a systemic, life-threatening complication following infection (1). It is important for all healthcare professionals to be able to recognise sepsis and to take appropriate action. We designed an e-learning resource aimed at medical and nursing students. The learning objectives were for students to:
1. Know how to recognise sepsis;
2. Know how to escalate concerns about a patient using the SBAR structured handover tool;
3. Gain an awareness of the management of sepsis.
Student-authored e-learning is a form of Peer Assisted Learning (PAL) (2).

Methodology:
Our design process was based on the ASSURE model used in instructional systems design (3). A short survey was created for medical and nursing students to analyse prior knowledge and skills relating to sepsis, and attitudes to e-learning. The results of the survey and discussions with stakeholders (including medical educators and healthcare professionals) informed the design of our resource. Xerte Online Toolkits was chosen as the development platform as it allowed us to integrate audio-visual and interactive elements to the resource (4).

An evaluation questionnaire was designed using Google Forms. This was integrated at the end of the e-learning package.

Results:
Forty-five responses to the evaluation questionnaire were submitted by students. 44 of the 45 responses were from undergraduate medical students ranging from years 1 - 5. 1 was an undergraduate nursing student.
88% (n=40) of students agreed or strongly agreed that the e-learning resource was relevant to them. 77% (n=35) agreed or strongly agreed that they felt more confident in the recognition of sepsis. 75% (n=34) agreed or strongly agreed that they felt more confident in the use of the SBAR handover tool to escalate concerns about an unwell patient.
Analysis of the free text comments identified common themes. Students praised the interactive elements and liked the concise explanations and definitions. Areas identified for improvement included reducing the quantity of text in some sections and adding clearer explanations for the interactive activities.
"Very simple. Covered the main points in a concise manner and allowed interactiveness as well." - Year 5 medical student
"I found the first activity quite confusing (moving the definition). A little explanation as to what to do would have been helpful" - Year 1 medical student

Discussion:
Sepsis is a common clinical condition that medical and nursing students will encounter whilst on placement and in their future careers. The e-learning package was designed to equip students with the skills and confidence to recognise sepsis and escalate any concerns about patients using the situation, background, assessment, recommendation (SBAR) structured communication tool.

The resource was well received by medical and nursing students who provided positive feedback showing that the learning objectives were largely achieved. This suggests that e-learning may be an effective tool for multidisciplinary teaching. Areas for improving the resource included reducing text content and improving signposting of interactive elements.

Our experiences from this project show that student authored e-learning is well received by fellow students. With support from faculty, setting up a PAL programme for student-authored e-learning would be feasible and could enhance undergraduate medical curricula. Institutional support is important to promote e-learning resources amongst students. Our package was adopted by the medical school, but not by the nursing school, therefore the majority of our users were undergraduate medical students.

The final e-learning package can be viewed here: https://xerte.cardiff.ac.uk/play.php?template_id=428

References:

Ref: 064, Board: C3
The attitudes of medical students towards commercially developed and peer developed medical education apps

J Beaumont, T Vincent, J Price
Brighton and Sussex Medical

Background:
The rise in popularity of smartphones among health care professionals has led to an increasing library of apps for medical education and mobile learning (m-learning) (1). M-learning in higher education is not a novel concept conceived by the smartphone era, as education institutions were already developing the ideology and relevant educational tools for the personal digital assistant (PDA) (2). However, a problem sustained throughout M-learning history, particularly expressed by students in higher education, is finding accurate, reliable and appropriate sources for learning, despite m-learning being promoted by their institution (3). In health care, these issues are no different and medical students continually highlight a lack of guidance towards relevant and high quality learning apps by their respective institutions (4).

Recent research suggests m-learning can be an extremely positive learning tool with advantages being its ease of use, enabling learning during “dead time” such as travelling and facilitating learning during clinical settings by providing instant access to facts (5,6). Despite this, limited information is available on the attitudes of medical students towards these apps, how they determine the quality of apps, how these apps assist with their learning and why they use certain apps. Furthermore, all apps are often grouped together as m-learning resources despite the wide variance that can occur (cite), thus apps with huge commercial institutions behind their development are considered in the same light as apps developed by an individual. To combat this, our research aims to illuminate the attitudes of medical students towards medical education apps and specifically compare commercially developed apps to peer developed apps to give insight into what apps are useful, why is and how medical students determine this.

Methodology:
This research used an exploratory sequential mixed methods approach. Qualitative data was collected in focus groups and used to generate a quantitative questionnaire. All 3rd, 4th and 5th year medical students at Brighton and Sussex Medical School (BSMS) were invited to attend a focus group consisting of 5 – 7 participants in each group. Recordings were transcribed verbatim and data was analysed using a generic thematic analysis. The results were used to generate a questionnaire which was piloted with intercalating medical students and then distributed amongst all 3rd, 4th and 5th year medical students. Survey data was formatted into numerical form and then interpreted using described statistics. Chi-squared tests were then used to identify any significant associations.

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

Discussion:
Medical schools have been slow to implement m-learning into curricular perhaps due to limited scholarly research and lack of evidence base (4). This research has identified themes and ideas from medical students at BSMS towards m-learning. The researchers hope this data can be used as building blocks to enable further enquiry and development surrounding m-learning so as to integrate it more closely with the wants and needs of medical students.

References:
‘Too many cooks’ or ‘the more the merrier’? – Opportunities and challenges of 34 teaching fellows in one trust
J Guckian, K Jobling, M Ahuja
Newcastle Upon Tyne Hospital Trusts

Background:
The rise of the Teaching Fellow is a well-documented phenomenon in medical education[1]. The roles of teaching fellows can be wide ranging, from continuous pastoral support for students to filling teaching gaps[2]. However, the exact number of teaching fellows in the UK is not known, which some regions supporting the role more than others, developing communities of practice to minimise isolation associated with the job[3].

Aims
This project aims to understand the experiences of teaching fellows working together in a large group. The objectives include identifying drawbacks of working as one of many specialty-specific teaching fellows, in addition to documenting occasions of team-based collaboration.

Methodology:
Methodology
This project will be approached from an interpretivist stance and specifically phenomenological methodology in order to understand the lived experiences of our clinical teaching fellows.

Methods
This study will meet with 34 teaching fellows currently employed at Newcastle Upon Tyne Hospitals Trust. These doctors mostly work in 50/50 clinical/teaching posts. Focus groups will take place, with questions focusing on the different roles teaching fellows have assumed, and whether they feel they have attained enough teaching time in their dual role. The focus groups will also explore whether a large teaching fellow team benefits a supportive and collaborative environment, and whether there are any limitations associated with working as part of a larger team. To collect quantitative supporting data, teaching fellows were asked to log their teaching hours during the above time period, to provide context for the focus groups.

Results:
This study is ongoing. Focus groups will take place in February and March 2017.

Discussion:
Early discussions have revealed themes of supportive mentoring, in addition to challenges of balancing clinical and teaching roles.

References:
Can teaching junior doctors on aspects of Teaching and Learning improve their confidence and increase the likelihood of them considering a career into Medical Education?
C Deakin, S Delay
Nottingham University NHS Trust

Background:
Teaching and Learning is an integral role of a doctor, featured in the Hippocratic Oath and more recently in the GMC’s outcomes for graduates as well as multiple royal colleges’ curriculums1,2. Junior doctors are encouraged to teach from an early phase of their training but very few receive formal instruction on how to deliver an effective teaching session.

Teaching theories around educating professional teachers is well established, yet in medicine most faculty development courses are aimed at senior clinicians with many years of teaching experience. Junior doctors are eager to teach but recognise and identify potential barriers to teaching in the clinical environment1,2,3. Often junior doctors feel ill prepared to teach and as a consequence departmental Teaching Fellow posts have become increasingly difficult to fill3.

At Nottingham within the Undergraduate Medical Education Department, we have introduced a half day teaching course for Junior doctors offering tips on teaching across different settings; with the aim to evaluate increased teaching confidence and the likelihood of them pursuing a career into medical education.

Methodology:
Twelve junior doctors registered to attend (n=12) the teaching course. There was multifaceted approach to the design a half day course which comprised of group lectures on aspects of teaching theories, tips on classroom structure and design, use of technology, receiving and giving feedback and addressing students in difficulty. The sessions were reinforced with interlaced group activities. The participants also delivered a pre-prepared micro-teaching session and fed back on each other’s performance, allowing consolidation of the taught components of the course. The attendees (n=12) were asked to complete a Pre and Post online questionnaire evaluating their confidence in different aspects of teaching and consideration of a career in medical education.

Results:
The preliminary results are encouraging although we recognise the limited numbers of attendees. This project is ongoing and an additional teaching day has been scheduled to increase attendee numbers. We wish to present the results as a poster presentation once the additional teaching day has been delivered with a more meaningful data set but the aim of this project is to hopefully demonstrate changes in; candidate’s perceived confidence in teaching skills once instructed upon them and likelihood of pursuing careers in medical education.

Discussion:
Junior doctors are highly motivated individuals with a potential to make good teachers. Junior doctors may be best placed to teach medical students as near peer teachers but require taught teaching techniques and class management skills to deliver effective sessions 4. Fostering early, junior doctors may become enthused to consider teaching as a career pathway.

Conclusion:
There have been encouraging comments from the junior doctors on all aspects of the course. Three candidates have expressed further interest in medical education, requesting involvement within our undergraduate medical education department for teaching medical student as a direct result of attending the course. Further conclusions will be drawn from the full data set when presenting.

References:

Ref: 118, Board: C7
Innovative Quality Control: The Promoting Excellence Portal, a Developmental Tool for Departmental Improvement as well as compliance
S Dearman, M Johnson, M Philips, L Brown, A Brittlebank
Cumbria Partnership NHS Foundation Trust

Background:
The General Medical Council (GMC) have set out clear responsibilities relating to quality assurance, management and control in its Quality Assurance Framework1 for medical education. This hierarchy of educational governance puts the requirement for quality control with the Local Education Provider but was not intended to tell such providers how this should be done. Educational governance can be a compliance driven process, not necessarily experienced as engaging by educationalists or clinicians and there is no clear and consistent approach to this used within the NHS2. We set out to combine the educational principles of reflective practice, the portfolio-based learning ubiquitous within medical education and GMC standards to produce a developmental tool that improves departmental educational performance as well as providing information on compliance with standards.

Methodology:
We produced an electronic portfolio as a developmental tool, the Promoting Excellence Portal, this treats the Medical Education Department as if this collective is a single learner. Instead of a curriculum with learning outcomes, against which to assess improvement and demonstrate capability, we used the outcomes within GMC’s Promoting Excellence: Standards for Medical Education and Training3. “Evidence” is uploaded using existing data such as trainee placement feedback, teaching event evaluations, education committee minutes, development plans and so on. With each submission of evidence, a narrative is included to give contextual meaning including reflection as to how the evidence demonstrates achievement, improvement and development planning. A RAG rating is also included to indicate the degree of compliance. Each team within the overall medical education department can at any time add evidence, review its improvement and be sighted on any blind spots they are not addressing. Assurance reports can be generated by the Promoting Excellence Portal for internal consumption but also for external educational organisations when performing quality visits.

Results:
From external quality visits, the Promoting Excellence Portal has received very positive feedback from Health Education England (HEE), North West and North East Offices and Newcastle University Medical School in terms of its approach to and provision of high level, simultaneous demonstration of quality improvement and compliance. The portal will be included in the innovation category in the GMC’s 2018 regional inspection to HEE NE.

Discussion:
We have found greater engagement with the quality control process in approaching educational governance this way, from our clinical educationalists as well as non-clinical members of our Medical Education department. We have also found greater efficiency, where all information is kept in the relevant place and allows for direct transfer of existing information such as placement evaluations reducing the administrative burden. By using improvement as the organising principle, the familiar structure of the developmental portfolio with reflective writing the Promoting Excellence Portal has enabled us to embed educational meaning into a process that risks being compliance driven.

References:
1.  www.gmc-uk.org/education/qaf.asp
Lights, camera, action (and reflection): video enhanced peer observation in medical education
K Pickard, I Goff, J Fisher
Northumbria Healthcare NHS Foundation Trust

Background:
Peer observation of teaching (POT) is a recognised tool to improve effectiveness of teaching (1), benefiting the teacher through deeper self-reflection and the learner through subsequent improvement in learning environment (2). Local pilot work (unpublished) within an undergraduate medical education department identified barriers to the implementation of a local POT programme, consistent with those shown in other studies (3):
• Scheduling and timing of sessions due to clinical workload
• Perceived hierarchy and reticence in feeding back to more experienced peers
• Unclear aims of POT and the notion of its use as a means of assessment

Video enhanced POT refers in our study to the recording of a teaching session for an observer to review after the event; thereby addressing the time and scheduling barriers identified above. The review of video footage is a recognised tool in educational practice (4) however there is limited literature around its use in medical education. The aim of this study is to assess the feasibility of video enhanced POT within an undergraduate medical education department.

Methodology:
Video Enhanced Observation (VEO©) is a resource which provides an app to record sessions and an online portal to store and share the session for remote POT and feedback. VEO© also provides bespoke ‘tag-sets’ for the observer to bookmark important parts of the video for use during face-to-face feedback. This system was selected as the tool to enable video enhanced POT within this study. To determine the feasibility of video enhanced POT, we designed a two-phase study:
1. Initial logistical ground-work
KP recorded teaching sessions with the VEO© app and then uploaded the session to the online portal. KP reviewed the recorded sessions seeking to identify any logistical challenges within the process.
2. Small-scale qualitative study
Participants were granted VEO© access and received training on using the app and portal. Each teacher was required to upload at least one teaching session for peer review, and in turn review the session of another participant. The feedback and evaluation session for each peer review is face-to-face.
The teachers were invited to a focus group to explore their experience of using video enhanced POT. On recruitment, participants provided informed consent and were able to withdraw at any stage. Audio data was recorded and transcribed and thematic analysis performed. The theme structures and coding was then reviewed by an additional researcher to increase rigour. The study has been granted ethical approval and has been approved by the Trust Research and Development team.

Results:
1. Initial logistical ground-work
Logistical limitations addressed during the first stage of the study included:
• Picture and sound quality varied according to device used. A departmental iPad was made available for use which provided the best recording
• The Trust education centre did not have WiFi access during the trial period to upload the session to the VEO© portal. KP uploaded to the portal on a home WiFi network; this issue should be overcome now WiFi is in place
• A concern regards the data security and confidentiality of these stored data. The portal is a private, password-protected space and uses AWS security, including encryption at rest and on transfer
2. Small-scale qualitative study
Undergraduate tutors are currently being orientated to the VEO tool. Once final approval has been obtained the use of VEO© will begin, along with recruiting tutors for the focus group. The results of thematic analysis from the focus group data will be presented at the meeting.

Discussion:
Peer observation of teaching is a recognised tool to improve teacher effectiveness; however barriers exist to its use within medical education. Video enhanced peer observation may address some of these barriers. The first stage of this study refined the local process, and the second stage will explore and evaluate the experience within an undergraduate medical education department.
References:
Training the trainees: Can senior trainees provide formal supervision roles?
S Scales, A Battersby
Newcastle upon Tyne Hospitals Trust

Background:
The allocation of an educational supervisor is important to medical trainees (1). Educational supervisors provide feedback, pastoral care, mentorship and development of skills in the trainee (1,2). Supervision quality depends on the relationship between the supervisor and the trainee but various courses are available to assist the development of the supervisor (1). Trainees are often aware of problems associated with supervisors not being fully prepared for the role (3). They report that educational supervision meetings can be improved by shifting the focus of the session to encourage the trainee (3). Well-functioning supervision can assist in educational outcomes of trainees, but also in positive patient outcomes (4).

New consultants are most at risk of being under-prepared for the role of educational supervisor (5,6). They describe confidence with clinical skills, but less so with managerial roles or care of a poorly performing trainee (5,6). New consultants therefore may undertake specialist, non-mandatory, courses to help this transition. A 2012 study reported that management, supervision and care of struggling trainees is not addressed until the final year(s) of training resulting in increased anxiety about these aspects once in consultancy (6).

Little is published on the development of the educational supervisor role for senior trainees prior to consultancy. This case study looks into the impact of a training course for ST8 paediatrics registrar about to complete training and embark on their consultant career. Following this, the opportunity to undertake joint educational supervision of a ST1 paediatrics trainee alongside an established educational supervisor was carried out and the thoughts of both trainees is discussed.

Methodology:
A ST8 Paediatric trainee undertook a non-mandatory RCPCH educational supervisor course as they had identified a training need for themselves. The ST8 trainee reported that following this course, they were informed that senior trainees should be encouraged to take on a co-supervisor role.

Case study interview with ST8 trainee following RCPCH educational supervisor course, prior to undertaking educational supervision and following supervision of an ST1 trainee.

Results:
An initial educational supervision meeting was conducted with an ST1 paediatrics trainee. During this meeting career plans, ability to obtain work-based assessments and optional training courses were discussed. The ST8 reported that outlining their role as co-supervisor and considering the needs of the ST1 by formulating objectives of the supervision were beneficial. They also reported that formal career advice and supporting the creation of trainee specific development plans required either further training or support from the senior supervisor. The ST1 was able to differentiate between the two supervisors, describing the ST8 as able to provide practical portfolio advice; tips and advice about timing, revision and perspective of paediatric examinations; and suggest additional courses which may be of benefit to training. However the consultant supervisor was more confident in providing their career advice in comparison to the ST8.

Discussion:
There were benefits for both the ST1 and ST8 by participating in this study of senior registrars taking on educational supervisor roles. The ST1 benefited from having additional support, a second person to discuss concerns with, and increased accessibility to a supervisor. The ST8 described feeling more confident about supporting the ST1 in a more formal setting and with a more clearly defined role.

Further meetings and data collection are continuing. If this proves successful, a ST2 paediatric trainee will also have supervisor support from the ST8 and their thoughts will be discussed. If this again is found to be beneficial, it would be a recommendation that all ST8’s in paediatrics prepare for their consultant role by acting as an educational supervisor to a junior trainee alongside an established consultant supervisor.

References:

Ref: 250, Board:D1
Faculty Development

Undergraduate clinical OSCE refresher training for examiners: face to face or Google Forms?
J Acheson, N Levage, J Sillett
University of Leicester

Background:
In 2014 the University of Leicester Assessment Team changed to the Borderline Regression Method for all clinical OSCE circuits. A ninety minute face to face examiner training package was developed, which has been delivered over the past four years using video recorded mock student OSCE stations and an interactive voting system using Turning Point. For the 2018 clinical OSCE circuits, examiners who trained in 2014 were required to undertake refresher training. This study aims to explore the reasons why examiners chose to attend the face to face refresher session or complete the e-learning training package and their experiences of them.

Methodology:
A new two hour face to face examiner training package was devised with eight new examples to incorporate Medicine, Surgery, Clinical Skills and Professionalism. Three separate one and a half hour e-learning examiner packages were developed using Google Forms again including Medicine, Surgery and Clinical Skills. Examiners who trained in 2014 were emailed in September 2017 with the option of either attending face to face training to be held at the University of Leicester Medical School or undertake the e-learning training via Google Forms. The face to face training sessions took place in November, December and January 2017 and the deadline for the e-learning training was 2nd January 2017. E-learning examiners were emailed a percentage breakdown of the global scores for each video from the cohort with reasons explaining the justification of the most common global score. They were asked to reflect on how they had marked each video and the reasons they had given for the award of their global scores. Qualitative data was obtained via Survey Monkey for the face to face training and via Google Forms for the e-learning package.

Results:
A total of 272 examiners were trained face to face in 2014. Of these 100 (37%) confirmed that they would examine in the 2018 clinical OSCE circuits. 19 (19%) chose to attend the face to face sessions versus 61 (61%) who chose to undertake the e-learning training via Google Forms. In total 20 (20%) examiners had not undertaken either. Common themes were identified from the qualitative feedback. Examiners who undertook the e-learning refresher training liked the flexibility of completing the training when they could plan it. They missed having the robust discussions with other examiners in the face to face setting as this helped to benchmark their global scores. The breakdown of all the global scores from the cohort was received well and they took the opportunity to reflect on how they had marked each video especially when compared to their peers. A forum for discussion with other clinicians who had undertaken the training would have been valued. Examiners who undertook the face to face session enjoyed the personal contact and the discussion of the global scores with their fellow examiners. The input and discussion from the session lead, who directed the debate enabling them to feel more confident in their benchmarking. Under-confident IT skills was also a factor in choosing the face to face session.

Discussion:
We will continue to give examiners the choice of how they want to refresh their training. Future developments will include a discussion board for the e-learning examiners to debate the breakdown of the global scores as a group or a thirty minute face to face session will be delivered if the e-learning examiners want to debate face to face. Further work will include assessing the impact of the e-learning and face to face training in terms of examiner performance and whether there is a difference which may ultimately influence the choice of training. The issue of examiners who had not completed either was addressed by a pragmatic decision from the Medical School. They would be required to undertake either the face to face examiner refresher or the e-learning package in 2018 to remain on the examiner training database as there are further clinical OSCE circuits in September 2018.

Ref: 111, Board: D2
Undergraduate clinical teaching fellowships in 2018: a UK cross sectional survey.
R Morgan, W Gatfield, I Eka
Bath Academy, University of Bristol

Background:
Several reports and reviews over the past 15 years have described teaching as an integral feature of the best postgraduate medical training. The outcomes of Modernising Medical Training and subsequently the Shape of Training review have restructured postgraduate medical training since reforms began in 2005, and the intended quicker completion of specialist training was the intended outcome (1, 2). The General Medical Council’s flagship medical guidance, Tomorrow’s Doctors and Good Medical Practice, both affirmed the importance and expectation of doctors to develop teaching roles from undergraduate years onwards. Meanwhile, a growing proportion of junior doctors search for opportunities outside linear postgraduate medical training programmes, in the supportive roles in medical practice - leadership, research, service and quality improvement, and teaching. However, teachers are often recruited based on clinical experience and academic expertise and not educational expertise. Clinical fellowships in teaching and medical education create opportunities to gain qualifications and experience in medical education at undergraduate and postgraduate levels, and their position in UK healthcare has not been formally evaluated since 2008 (3). The focus of this survey is to gather up-to-date nationwide data about junior doctors in positions with specific roles to deliver undergraduate medical education in the clinical setting.

Methodology:
The “clinical teaching fellow” has been strictly defined as pre-consultancy doctors appointed with a dedicated role for (>40%) of their contracted hours, to deliver undergraduate medical education to clinical years students in a healthcare setting, as defined by their job description. Those involved in an NIHR academic clinical fellowship with educationalist training will be included, but doctors in other training programmes will be excluded, along with those in roles primarily involved in delivering pre-clinical and postgraduate medical education, or education outside a healthcare setting e.g. anatomy demonstrator or lecturer.

Two surveys will be disseminated to all UK medical school deans and then re-distributed to junior doctors in teaching roles at all trusts. Responses will be collected over a fixed period and resulting data will be analysed and willing respondents followed up by telephone interview.

Results:
Data and analysis will be available for presentation at ASME ASM 2018. The surveys will measure the prevalence of clinical teaching fellowships across the UK and we hope to review their funding, impact on undergraduate education, innovation and development. We also hope to understand more about clinical teaching fellows’ motives, career opportunities and general outlook in current professional climate.

Discussion:
We aim to compare our findings with those of the 2008 survey and we expect data to support the anecdotal evidence suggesting a significant proliferation of clinical teaching fellowships. We expect to see a shift in doctors’ motives for undertaking these roles due to the turbulent professional climate, but do not expect their roles to have been uniformly supported by enrolment in postgraduate educational qualifications. We would like to review in greater detail the effect clinical teaching fellows are having on other junior doctors’ teaching opportunities in healthcare settings, but anticipate this survey will significantly impact the training support given to a growing body of junior doctors seeking diverse opportunities outside medical specialty training.

References:
1) Fuller Geraint, Simpson Iain A. “Modernising Medical Careers” to “Shape of Training”—how soon we forget BMJ 2014; 348: g2865

Ref: 142, Board: D3
Future Primary Health Care Challenge: How does Education and Training General Practitioners need to adapt?

TH Hoang,
PhD student, Graduate School of Education, College of Social Sciences and International Studies, University of Exeter, Exeter, United Kingdom

Background and Purpose

In recent years, both developed and developing countries are facing global concerns such as population explosion, climate change, environmental pollution, and globalization[1] [1-4]. These concerns put pressure on primary health care (PHC) throughout the world, with increasing demands for consultations and changing nature of clinical presentations. General practitioners play a key role in delivering PHC, treating all common diseases and referring patients to hospitals and other medical services for urgent and specialist treatment. Additionally, the general Household Survey indicated 86% of health problems of patients are managed exclusively in primary care and the potential for lifesaving treatment in general practice (Thomas, 1998)(Office of National Statistics, 1998). However, a shortage of general practitioners is putting this at risk in wealthy and poor nations alike [5-7].

This study, which is the first stage of my PhD, aims to describe different pathway types for the education and training of general practitioners worldwide, through a scoping literature review the result would provide the background to develop a new education and training pathway for GPs in Vietnam in the following stages of the research.

Methodology

Study design:
1) Scoping literature review
2) Qualitative research (interviews with key stakeholders)

Data sources: The databases will be searched to establish and develop the literature including ERIC, Medline, and EmBase.

Search terms:

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Eligibility criteria for selecting studies:
There will be seven eligibility conditions for inclusion in the scoping review. This will include:
(1) Must be written in English or Vietnamese language,
(2) Must be about general practice/family medicine training
(3) Must be about education and training pathway
(4) Must contribute to the research question
(5) Must be peer review articles, reports
(6) Must be published in 2010
Data extraction: At the first step, all searched documents will be screened with eligibility criteria and quality. Then, remaining documents will be coded. At the second step, Data will be analysed using a narrative synthesis and mapped with the historical development of medical education.

Results
Results from the scoping literature review will be presented different type of education pathways combination with the result of qualitative study to introduce a new pathways for Vietnam that might be best fit for future healthcare needs.

Discussion and Conclusion
In general, so far, the development of medical education has been a success story, combining innovative teaching, effective learning methods and introducing clear standards for accreditation such as outcome and competency based education, professionalism in education, assessment tailored to curriculum and students’ needs. Meanwhile, the requirements of curriculum are becoming complex and enormous because of the influences of emerging global issues and hard-pressed healthcare needs on the context of professional practice of GPs. Furthermore, transparency and communal accountability are required increasingly in designing curriculum to assure accountability and efficiency of educational programs with society. Nonetheless, there are fewer syntheses of growing literature in the medical education reform as well as analysing specificity and differences of current curriculum models in the world for GP. Thus, the result of literature review will enable to identify typology of education pathways in training GP, and presuppose “what shall medical curriculum models be best suited to the societal needs and particular country contexts in the future?”

References

Ref: TEX2, Board: D4
Integrating International Medical Graduates
C Ratcliff
Health Education England North East

Background:
International medical graduates (IMGs) is a term used to describe a doctor whose primary medical qualification was gained in a country outside of the UK. The NHS relies on a significant proportion of international medical graduates, with the GMC estimating that 37% of registered doctors are IMGs (1). However, despite such high numbers and the important contribution these doctors make, research shows that IMGs are often poorly inducted, rarely supported and more likely to fail postgraduate examinations and face fitness to practice claims compared to their UK counterparts (2,3). Research confirms that the challenges faced by IMGs are widely known about but that the interventions in place are limited, generic and do not address the unique experiences and individual needs of this group of doctors (4).

Methodology:
A review of literature was conducted with the aim of identifying common challenges faced by IMGs and what regional support, if any, is currently being provided. The literature review identified a number of existing regional interventions but noted that these were typically delivered as short, generic inductions with little to no ongoing support (4). The interventions were not tailored to the unique requirements of the IMGs, nor were they implemented following a self-assessment of their individuals learning needs. By identifying 'problem areas' for IMGs, and recognising the limitations of current interventions already in place, recommendations for more comprehensive interventions can be made to ensure the safe and effective integration and adaptation to the NHS. Alongside this literature review, a questionnaire survey was developed and will be electronically sent to a cohort of IMGs. It will provide qualitative data eliciting the perceptions and experiences of IMGs working in the North East of England. Following analysis of the responses to this survey, a tailored support programme and online resource hub will be designed and implemented and its perceived effectiveness evaluated.

Results:
The literature review identified specific areas of difficulty faced by the majority of IMGs in the UK. These areas can be themed as follows: communication and culture, ethical standards, professional regulation and social integration (4,5,6,7,9). The review identified that current intervention does not address these themes and as such, fails to provide IMGs with appropriate and adequate support. The review highlighted that failure to provide such support leads to the emergence of patient safety and performance concerns. Further to this, any intervention implemented would need to be provided on a long term and on-going basis and be directly accessible. Other interventions identified as being prudent to the development of a comprehensive and integrative support programme include the provision of a buddy system to deliver ongoing support; early and regular contact with an appropriate clinical supervisor; regular, informal social events to encourage cultural awareness and social integration; and an online resource hub that is universally accessible to IMGs prior to their arrival in the UK (4,6,8,9). The results from the questionnaire survey will be evaluated and the results of this presented, alongside the framework of the support programme and online resource hub.

Discussion:
Current systems and support in place for IMGs are not fit for purpose and more is needed to avoid the potential pitfalls that are associated with incomplete integration in to a complex and diverse system. A tailored support programme is required to address the unique needs of this group of doctors alongside a comprehensive online resource hub accessible to IMGs prior to their arrival in the UK. Provision of such a programme will hopefully lead to improved communication, better understanding of ethical and professional standards and cultural and social integration for the individual. This will then reduce the likelihood of said individual failing to progress and/or facing fitness to practice claims.

References:

Ref: 232, Board: D5
The use of the Work Station Learning Activities (WSLA) methodology in Health Science Education. An experience with an international cohort of Dentistry students from the Universidad Europea de Madrid (Spain).


Universidad Europea de Madrid

Background:
The Bologna Process and the European Higher Education Area (EHEA) has driven strong educational reforms at the national level, aiming to make higher education more relevant to the individual, allowing students to easily move between degrees and countries, and from academia to job market. Under their auspices, an integrated curriculum was recommended as the best way to achieve the acquisition of competences, thus prompting Spanish Universities to adopt the required changes in teaching methodologies with an increase in active learning activities at the expense of teacher-centered lectures. Despite national recommendations, and that medical education reformers advocated combining disciplines and organizing integrated learning experiences for students, the influence of a Flexner vision of health science education in Spain [1, 2]. Curricular integration has become a difficult and complex task. In some leading institutions, however, integration approaches follow Harden’s model [3]. According to this model, integration is achieved by interrelating and unifying subjects that are frequently taught across separate courses and/or departments. To address this, the Department of Basic Biomedical Sciences at the Universidad Europea de Madrid (UEM) in Spain has been working on building up a common frame for curricula integration in all its Health Sciences degrees.

Methodology:
Our aim is to exemplify an activity from this pilot program that implements our new instrument, namely the Work Station Learning Activities (WSLA), for teaching basic sciences with a horizontally integrated scheme [4]. In the present study we aimed to epitomize an example of a session in a WSLA module from a pilot experience implemented in a cohort of 260 first year Dentistry students (49.2% of participants are taught in Spanish whereas 50.8% attend to English driven lessons). We also aim to explore their perception of the new methodology by participant students.

Results:
In our example, we followed a WSLA dynamic, which follows a modified scheme based on a TBL [5] strategy adapted to a 2-h session. We used a typical dentistry clinical procedure (clinical scenario) based on inferior alveolar nerve blocking anesthesia with lidocaine and explored possible difficulties derived from usual clinical management. All students rotated through different workstations that cover all learning objectives regarding structure and function as well as core foundation subjects, which are integrated tightly together. To evaluate students’ perception of WSLA, students enrolled in the activity were selected for a survey study. 42.3% of the students participating in our pilot experience indicate that the WSLA activity has helped them to integrate several topics included in different subjects. Concerning methodologies and along with our previously published work [4], the results confirm that students prefer active learning methodologies to the typical masterclass.

Discussion:
From our pilot experience we conclude that implementation of active learning methodologies is paramount to undergo a big shift of Health Science curricula to a competency-based design. Collected data suggest that health care international students tend to embrace this new methodology better than the national students on the same degrees, especially when WSLA is conducted through active learning methodologies. Further statistical analysis should be pursued to assess the effectiveness of the new methodology in terms of academic performance.

References:

Ref: 313, Board: D6
What is the feasibility and value of South-South medical electives within Africa?

K Daniels
University of Dundee

Background:
Electives are parts of the curriculum where students have the flexibility to choose both the study topic and location, which is often overseas. International Medical Electives (IME) are a well-established part of curricula at universities in high income countries (Izadnegahdar, 2008; Miranda 2005; Law 2013) with 40-50% of students choosing to undertake an elective in a developing country (Law 2013; Miranda 2005). IME add value to the education in different fields including clinical knowledge and skills, attitudes, global perspectives, personal and professional development (Dowell & Merrylees, 2009). However medical students from these low income countries, that host many IME students from high income countries, have limited access to IME and consequently the learning opportunities they provide.

South-South Medical Electives Exchange (SSMEE) Programme has been piloted as a potential way to redress this balance and create IME opportunities for medical students studying in Africa. Two medical students from each of: College of Medicine, Malawi; Makerere University, Uganda; University of Rwanda, Rwanda and Witwatersrand University, South Africa participated, each undertaking a four week clinical elective at one of the other participating institutions. This research sought to evaluate the value and feasibility of this pilot.

Methodology:
This is an example of qualitative case study evaluation research. All eight participating students were invited to complete a pre-elective questionnaire and post elective interview using an instant messenger service to evaluate their experiences and learning during SSMEE. The member of staff involved from each institution will also be interviewed.

Framework analysis (Pope, Ziebland & Mays, 2000) will be undertaken on the interview data. This inductive process requires immersion in data to achieve familiarisation from which a thematic framework will be identified and data coded and indexed to the framework.

Results:
Data analysis shows students found the electives of significant value. Learning was achieved in areas such as: clinical knowledge and skills; personal and professional development and global perspectives.

One student describes her personal and professional development:
“In terms of myself it reaffirmed me that I was in the right profession and that I was becoming the competent doctor I've always wanted to be... Before the elective I didn't think I'd be comparable with a student in a different institution but now I know I can be and there's no excuse for not dreaming big.”

Another student states “the elective generally opened my thinking and nurtured my goals”.

Some students had thought they would have preferred an elective out with Africa there was a recognition that this was partly due to assumptions about what an elective was with one student stating: “the word ‘elective’ was associated with going outside Africa, it was as if it was the synonym”.

The financial feasibility has been largely linked to provision of bursaries though students have often required to meet the funding gap however those involved did manage this when required. Although an investment of time was required to populate the application system with elective information once this was done the application process ran smoothly and the computer system used for this was viewed positively.

Discussion:
The learning identified is consistent with themes described in the literature (Dowell & Merrylees, 2009) and as such shows that electives for African medical students within another African country are also of value and the SSMEE model piloted here, including the application system used, has been deemed successful and useful.

Challenges still exist in increasing opportunities for African medical students however this pilot could be expanded to include both more institutions and students. The bursaries provided have been key in enabling these electives to take place and so consideration of long term funding is required before expanding.

References:
Dowell J, Merrylees N. Electives: isn't it time for a change?. Medical education. 2009 Feb 1;43(2):121-6.
Achieving postgraduate interprofessional learning (IPL) in acute medicine: case-based learning or simulation?
G Sheibani, P Fletcher
Gloucestershire Hospitals NHS Trust

Background:
Students from different disciplines who work together in their early years are more likely to work effectively in their clinical years(1). Effective IPL has been shown to improve patient outcomes(2). The General Medical Council’s view is that “you must work collaboratively with colleagues, respecting their skills and contributions(3)” and this is echoed by the Nursing and Midwifery Council(4). There is very little evidence in the postgraduate setting exploring interventions that could help facilitate IPL and there is nothing comparing interventions when used with groups of staff in the same hospital. The aim of this study was to investigate whether case-based learning or simulation is better at helping doctors and nurses understand each other’s roles and whether the skills learnt are transferable to the workplace in the long-term.

Methodology:
To date, there is nothing in the literature as to timing of when formal IPL sessions between doctors and nurses should occur. Lave and Wenger’s theory of ‘communities of practice’(5) suggests that learning occurs within the community to which a member of the team is affiliated and so it seems reasonable that the early postgraduate years could be targeted initially. Two groups, each of two doctors and two nurses (up to two years post-graduation) were randomised to either a case-based learning session or simulation session. The sessions are identical in terms of learning objectives and duration. They will have anonymously completed the Readiness for Interprofessional Learning Scale (RIPLS)(6) before and after the sessions, a scale that has been used in previous similar studies. The primary outcome was any change in attitudes for each domain of the questionnaire. They were also asked to keep an anonymous diary for three months, to record situations where effective interprofessional working was required and their perception of whether this changed the outcome of a patient’s journey. Subsequently, they will be invited to a focus group at the end of the 3 months’ as well as completing the RIPLS questionnaire again.

Results:
Results from the analysis of the RIPLS questionnaire from each group pre- and post-intervention as well as the diaries and follow-up three months later will be presented.

Discussion:
There has been some limited research on this subject within undergraduate medicine(7) and in some postgraduate settings(8), although not within acute medicine. The focus of this study is to investigate which learning method is superior in achieving interprofessional learning within post-graduate acute medicine and whether learned behaviours are sustained. The implications of the results will be discussed.

References:
Charity starts at medical school. What can third sector organisations add to medical education?
C Timms, L Kelsey, T Issacs, J Hartland, K Jones
Swindon Academy, Great Western Hospital, University of Bristol

Background:
There is currently a climate of reducing costs in medical education and there is often a need to find low cost ways of improving medical education. Despite the role charities play in the scope of medicine itself, the role charities can play as educators in medical education has seemingly not been explored. We performed a literature search using the terms MEDICAL EDUCATION and CHARITIES and MEDICAL EDUCATION and THIRD SECTOR, giving 128 results, none of were deemed relevant. We invited staff from three charities in Swindon to support undergraduate tutorials for students from the University of Bristol placed in the Great Western Hospitals Foundation NHS Trust.

Methodology:
Students currently in their fourth year at Bristol University took part in sessions involving 3rd sector organisations. Students undertaking their Medicine for the Older Person placement attended a seminar with Swindon Carers, a charity who support patient carers. Students undertaking their Obstetrics and Gynaecology placement attended a simulation session on safeguarding in women’s health which was lead and facilitated by Nelson’s Trust, a women’s health charity who support women and their families who are in vulnerable situations. Students currently studying paediatrics attended a community placement with Koalas, where they helped in the day to day care of children with neurodisability and chronic disease.
Following their sessions students were asked to complete an online questionnaire. We asked the students what their experience with charities was and what they thought the charity staff brought to the session. We also plan to use a focus group with the charity staff to find out their experience of teaching medical students, what they thought charity group could add to medical education and the barriers to using charities in medical education.

Results:
Data is still being collected. By June 2017 this study will have captured approximately 8 months of feedback but initial results have shown that the 89% of students think third sector organisations should be involved in medical education, with 95% agreeing that they could add something to the teaching sessions that doctors cannot. In the descriptive answers they commented, ‘they picked up on nuances that as medical professionals we wouldn’t have noticed’ and ‘they had great knowledge of the sort of terminology patients would use’.
Third sector organisations have been very enthusiastic about their role in these tutorials to date and we will hold the focus groups with these groups in the near future.
Further thematic and descriptive statistical analysis of the questionnaires and focus groups will be available on completion of the planned sessions

Discussion:
Given the initial results of our research we hope to show the positive response of the students towards the third sector organisations and hope to detail what they thought they added to the session. We also envisage a positive response from the third sector organisations towards medical education with an identification of any barriers to their involvement. This pilot research will feed into a larger study involving third sector organisations with student selected components.

References:

Ref: 123, Board: D9
Designing a multi-professional non-technical skills simulation day – pitfalls & paragons
J Petrie, N Barton, C Mitchell
Imperial College Healthcare NHS Trust

Background:
Non-technical skills are increasingly recognised to play an important role in medical effectiveness [1]. During handover non-technical skills, in particular communication, are critical as there are multiple distractions and a high mental workload [2]. The I-PASS study demonstrated that providing a structure to handover and handover training can reduce patient safety incidents [3].

Multi-professional working is a key skill in today’s NHS. A body of literature supports the idea that increasing delivery of team-based teaching in a classroom or simulation setting improves healthcare safety and patient outcomes [4].

Methodology:
We designed a multi-professional simulation training day (for doctors and senior nurses) to explore and develop multi-professional working and non-technical skills in a range of scenarios including handover. The training day included a mixture of educational modalities; three short lectures (leadership, non-technical skills and personal resilience), one longer table-top role-play exercise simulating handover, and four shorter simulated scenarios involving either high-fidelity dummy-based simulation or actors.

The table-top handover scenario simulated the management decisions and multi-tasking required during a post-take handover, with participants split into in-coming and out-going teams with numerous distractions. This was followed by a group feedback session led by an experienced clinician. Four rotating simulation/role-play scenarios were designed to focus predominantly on non-technical skills of communication, situational awareness, leadership/followership and prioritisation. Each participant led in one of these scenarios and a group debrief was led by an experienced clinician following the scenario.

Results:
We obtained feedback from all 12 participants (6 doctors and 6 nurses) immediately following the training day. On a Likert scale of 1 (strongly disagree) to 5 (strongly agree) the whole training day was rated as interesting (4.64 (±0.50)), relevant (4.50 (±0.80)), enjoyable (4.58 (±0.51)) and of an appropriate difficulty (4.50 (±0.52)) and pace (4.50 (±0.80)). There was a non-significant trend for nursing staff to rate the day slightly lower than medical staff on all measures. Of note there were several free-text comments from nursing staff regarding the lack of multi-professional faculty (all faculty were medical except for one physiotherapist).

For the individual elements of the day, the table-top role-play scenario of a post-take ward round was found to be interesting (4.50 (±0.52)) and relevant (4.58 (±0.51)). Many of the free-text comments related to how useful the exercise had been particularly to practice decision-making in a “safe” environment. Ratings from both medical and nursing staff were similar.

The simulation/role-play scenarios were all found to be interesting (mean 4.77) and relevant (mean 4.71). However, two of the scenarios were more technical and in these there was a trend towards slightly poorer ratings from nursing staff particularly regarding pace and difficulty. Free-text comments from nursing staff mentioned difficulties understanding some technical content.

The three lectures were well rated, with a final lecture on personal resilience scoring 4.9 for interest and relevance, mentioned in numerous free-text comments regarding the informative value and relevance.

Discussion:
• This simulation training day provided practical training and development of non-technical skills and handover, which many participants had never experienced and found extremely useful.

• When designing a multi-professional simulation training day there is a fine balance to be achieved with technical elements and difficulty level; this could be mitigated by ensuring a multiprofessional faculty that reflects the participants involved in the design of the day.

• Personal resilience education was recognised by participants to be very valuable and should be considered for inclusion in training of this kind in the future.

References:
1 Sevdalis NS. Non-technical skills and the future of teamwork in healthcare settings. The Health Foundation. 2014.

Ref: 388, Board: D10
How does the education of health and social care staff lead to patient benefit: a realist synthesis?
J Illing, S Corbette, M Carter, A Kehoe, H Hesselgreaves, P Crampton, M Sawdon, M Swamy, G Finn, P Tiffin
Newcastle University

Background:
This study set out to identify how an educational/training intervention can lead to patient benefit and identify the processes and steps involved. Many previous researchers have assumed that the evidence cannot be explained or modelled in a repeatable way, or to do so would be too complex. We have chosen to explore this question using a realist synthesis approach which lends itself to explaining complex interventions.

According to the UK Commission for Employment and Skills (UKCES) the NHS spends over £40 billion on training per year. This involves a range of activities from the education and training of staff to continuous professional development (CPD) and quality improvement activities. However, there is a lack of evidence about how education and training can lead to patient benefit.

Realist approaches begin by producing and formalising an overarching theory as to how the set of interventions included in the synthesis may work. This research initially focused on exploring models of transfer of learning into practice. However, these theories focused on transfer to practice rather than transfer and evidence of patient benefit. Our theoretical approach was initially developed following the work of Kirwan and Birchall (2006) [1] and Kirwan (2009) [2].

The aim of the research was to answer the question: How does the education and training of health and social care staff lead to patient benefit?

Methodology:
A systematic search of the literature was conducted to identify educational interventions with health and social care personnel using the databases: Embase, Social Services Abstracts, PsycINFO, CINAHL, and Social Care Online. Search terms referred to three conceptual areas: education and training; patient outcomes; and health and social care occupations.

Over 24000 articles were identified, this was reduced to 1149 following review of title an abstract. Following full paper review, the final number of included papers was 465 publications that indicated both an educational/training intervention and a patient outcome. The final model draws on 50 key papers that contained in depth process information and facilitated detailed description of the intervention and supported data saturation.

We sought to identify the context (C), mechanisms (M) and outcome (O) variables in each paper, and the relationships between them. Theories were tested and refined through an iterative process. RAMESES quality standards were used to guide the approach used [3].

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Discussion:
The programme theory presented illustrates how and why interventions lead to patient benefit (or fail to), enabling those implementing educational interventions to identify the key features required to support transfer of learning that benefits patients.

It was later tested and refined using case studies and a guide was developed to inform future interventions for patient benefit. The study also worked on publication guidelines to evidence patient benefit.

References:
Inter-Professional Education: Building Bridges between Pre-Hospital and In-Hospital Emergency Teams
J Lipton, K Babla, S Chadha, G Bowden, B Uperty, N Grogan, S Thenabadu
King's College Hospital NHS Foundation Trust

Background:
Simulation is an established and evidence based teaching and learning modality with reported benefits to team-working and patient safety (1). Paramedics and hospital staff in the acute specialties are required to work together in brief, high intensity interactions in the Emergency Department (ED), but rarely if ever participate in shared training activities. We ran an inter-professional simulation exercise with a group of Paramedics, ED and Anaesthetic staff, aiming to enhance mutual understanding and improve teamwork between staff groups in the clinical environment.

Methodology:
We took a single adult medical scenario, following a patient from their home, to the ambulance and into the ED. After each of these three phases, structured debriefs were conducted, encouraging candidates to explore their respective roles, the challenges they face and the reasoning and processes underpinning their practice.
We evaluated the exercise immediately afterwards with a post-course feedback questionnaire using numerical scales and free-text answers. Candidates were also surveyed 2 weeks later, asking whether they had experienced a change in attitude or behaviour since attending the course.

Results:
We had 100% response rate to the questionnaire (n=10). 100% of respondents ‘strongly agreed’ that the course was ‘worthwhile’, ‘addressed their specific learning needs’ and that they ‘would recommend this course to colleagues’.

The two main themes from the free text answers were around improved understanding and increased mutual respect.

A number of in-hospital staff reported a ‘better understanding of prehospital work’ and increased appreciation of ‘how [paramedics] work and difficulties they face’. The paramedics reported a ‘greater understanding of the pre alert impact on ED and how this can be improved’.

Participants reported a new-found respect for each other, one commenting that, ‘we are all the same...everyone deserves respect...Our situations are completely different and to appreciate each other for what we do’.

There was a 70% response rate to the 2 week follow up questionnaire with candidates on both sides reporting changes in their attitude and behaviour following the course. Responses included:

‘Being more aware it’s a team effort and not Hosp v LAS.’
‘aspects of pre-hospital / hospital relationship that often generate friction and create problems where there needn’t be any... lot of these issues could be remedied... made me more aware of some of the pressures we place on hospitals’
‘made more effort to be friendly and considerate’
‘acknowledging the lead staff member and waiting until they are ready for a hand over. Being a little more patient!’
‘our job does not necessarily end after hand over and that we do have more to offer if needed, especially in critical situations such as a cardiac arrest. Also, I feel more confident in my interactions with hospital staff.’
‘i am working on making sure as the blue calls arrive they are being greeted and are only having to hand over to the team once, rather than the dribs and drabs as different team members arrive.’
‘listening to the paramedics feelings over hand over and interruptions and how nervous they can feel will make me ensure they get a chance for an uninterrupted handover whenever possible.’

Discussion:
This inter-professional simulation exercise has enhanced mutual understanding and respect between the pre-hospital and ED teams involved, leading to changes in their attitudes and behaviour in the workplace.
Further training days have been planned in our centre and we believe that given the impact of this intervention on our participants, the model should be considered for implementation on a wider scale.

References:
Inter-professional learning in the Emergency Department: an evaluation of a case-based podcast
H Emery, K Williams, P Rusby, S Stuart, T Subramanian, S Laing, J Sansom
South Bristol Academy

Background:
Teaching and learning in the Emergency Department (ED) can be difficult with increasing pressures on staff to manage the growing number of patients. Unfortunately, this can mean formal teaching opportunities are sacrificed for patient safety reasons (1). It is essential, however, for the multidisciplinary team working in the ED to keep up to date with current guidelines and evidence.

The multidisciplinary team (MDT) providing clinical care in the ED has become diverse to include doctors, nurses, emergency nurse practitioners, advanced nurse practitioners, paramedics and extended scope physiotherapists. The effective management of patients requires a team approach and often relies on each member having up-to-date knowledge to share. This highlights the need for all health professionals to learn together.

There has been an increase in the number of Emergency Medicine (EM) trainees using Free Open Access Medical Education (FOAMed), especially podcasts (2) (3). There are several benefits to FOAMed that may be able to address issues around ongoing medical education. It allows rapid content sharing and discussion amongst large numbers of inter-professional participants across wide geographic areas to share best practice, educational materials and expert opinion (4). There is little known, however, to what extent other members of the team listen to podcasts and whether it is possible to create a learning resource that is useful to the whole team. This study aims to find out whether inter-professional learning within the ED team is possible and whether a platform such as a podcast is an effective way of disseminating that learning.

Methodology:
‘case by case’ podcast is a case-based collaboration between an EM junior doctor and an Emergency Nurse Practitioner. The cases are based on presentations to the ED and emergency management of the conditions. It was created as a source of FOAMed for the ED MDT to provide up-to-date evidence-based information. A survey will be distributed to ‘case by case’ listeners to investigate which healthcare professionals have listened to the podcast and whether it proved to be an effective and useful aid to enhance MDT knowledge.

Results:
The podcast is released monthly, its debut was in September 2017, the aim is to data collect after the first series of six episodes. This will mean that a range of cases will have been published, allowing for more in-depth exploration of opinion.

Discussion:
In a time where there is a need to innovate to encourage a collaborative team approach (5), podcasts such as ‘case by case’ may prove to be an invaluable resource which could revolutionise the delivery of MDT teaching within the ED. This project will provide a useful insight into the use of such technology for learning in an ED setting. Following the analysis of results, the expansion of podcasts in EM may be indicated to enable effective inter-professional learning within the ED MDT.

References:

Ref: 358, Board:E3
Multi-disciplinary perceptions of multi-disciplinary medical simulation

O Ruscombe-King, L Kelsey
Swindon Academy, University of Bristol

Background:
Simulation based education enables knowledge, skills and attitudes to be acquired for all healthcare professionals in a safe environment (1). When planning multi-disciplinary team (MDT) simulation we anecdotally noticed that different health care professions and grades have a varying level of experience and confidence.

Methodology:
We designed a questionnaire to examine the simulation experience, confidence and perceived barriers from a variety of health care professions and grades. We distributed this questionnaire to all doctors, nurses and midwives at the Great Western Hospital, Swindon, junior doctors in Oxford, Bath and Liverpool, nursing and operating department practitioner (ODP) students at Oxford Brookes University and all medical students at the University of Bristol. Participants were asked to report their prior simulation experience as either not at all, 1 to 4 sessions, 5 to 8 sessions or regular sessions throughout training. They were asked to report their confidence from 0-10 and report any barriers or enabling factors to MDT simulation.

Results:
We received responses from 32 F1 doctors, 54 SHOs, 42 consultants, 41 staff nurses, 8 senior nurses, 2 healthcare assistants, 17 midwives, 69 medical students, 8 nursing students and 16 ODP students. All groups had experienced both single profession and MDT simulation.

Results for prior single profession simulation suggest that all medical grades including students with the addition of senior nurses had the most experience. These groups reported a mode response of ‘regular sessions throughout training’. Whereas, all other groups had a mode response of 1 to 4 sessions. Results for prior MDT simulation experience showed a more uniform picture. All groups except medical students report a mode response of 1 to 4 sessions. Medical students had a mode response of not at all (n:36) however, 25 students reported 1 to 4 sessions.

Medical grades including students and also registered nurses reported an average confidence level of above 7.5 for single profession simulation. Health care assistants reported a confidence of 6.5. All other participants including other student reported an average confidence between 5-6 with midwives as having the lowest confidence at 5.2. Medical student confidence (7.60) was similar to F1 confidence (7.63). Whereas nursing student confidence (5.7) was lower than staff nurse confidence (7.7). Confidence for MDT simulation was generally lower. All medical grades with the addition of health care assistants, registered nurses and senior nurses reported an average confidence level of over 7. Midwives again had a low average confidence of 5.0.Whereas all students had a lower average confidence of 4.8 to 6.5 with nursing students reporting the lowest average confidence at 4.8.

Reported barriers to MDT simulation were uniform from different groups and included lack of time, large number of people watching and being unsure of what different professionals understand. Factors that improved comfort included: clarifying professional competencies and skills level in pre-brief, purpose built simulation suite, adequately trained facilitators, delivering feedback at appropriate level and name badges.

Discussion:
These results suggest that all medical grades including students and qualified nurses have the most simulation experience and confidence. All groups had less experienced and less confidence in MDT simulation. Notably students of allied health professions had less confidence and experience than medical students. Midwives had significantly less confidence than other qualified groups. Factors important for successful MDT simulation include appropriate time, facilities and facilitators, a high quality pre-brief which clarifies different professions roles, competences and names. We plan to further validate these findings by distributing this questionnaire to midwifery students and explore the differences between professions in focus groups.

References:
Overcoming the challenges of Inter-Professional Education Delivery in a Busy Clinical Environment
S Jones
University Hospital of North Tees

Background:
Inter-professional Education (IPE) requires the participation of more than one profession with the goal of improving quality of care and collaboration between these professions (1). Our hospital has undergraduates in medicine, nursing (various disciplines), physiotherapy, paramedics and health-care apprentices studying across three different universities in the region. They all work in the same clinical area and have a shared ultimate goal of delivering safe and effective patient care. We sought to develop and facilitate IPE between third year medical students (MS) during their ward attachments after a ten week classroom based programme, and these undergraduate health care professionals (HCP).

MS had previous experience of IPE with pharmacy students. Previous authors have noted that this interaction has a major impact on learning specifically to prescribing (2) but is not transferable to the ward community of practice (3).

We hereby report our experience of developing and delivering IPE in a university teaching hospital.

Methodology:
The two facilitators (both medics) led sessions for 5-10 learners on 7 occasions. Each session was 30-45 minutes duration in the clinical area where the learners were working.

Learners and facilitators introduced themselves, talked about their previous training and current roles. This acknowledged the value of each others roles and professional identity (4).

Each session focused on a clinical case or situation that learners had identified as being challenging, or interesting and it had impact across all professions e.g: end of life care & mental capacity.

Learners contributed their thoughts & experiences from their professional perspective & facilitators answered unresolved questions. This aimed to promote active learning whilst preserving the balance of views across different professional groups (5).

After each session learners completed a feedback questionnaire detailing their professional group & prior IPE. Likert scales evaluated the following: enjoyability, learning about each other & the clinical condition/ situation, session design, involvement & desire for further sessions. There was also a free text option.

Scores for each domain were determined to rate the overall acceptability and usefulness of the sessions to the learners.

Facilitators reflected on their experiences of the whole programme to enable development of future IPE for other groups of MS and HCP in the ward environment.

Results:
Challenges included the fact that HCP ward placement timings & rotas were not aligned with that of the MS, therefore, assuring heterogeneity of the IPE group was difficult. We did, however, manage to ensure a minimum of three different professions per session with 6-10 learners per group.

We were unable to deliver the planned number of sessions due to lack of additional facilitators and their other commitments but every MS (n =39) participated in at least one IPE session during their ward placement. Due to lack of room availability the sessions could not be delivered on either the surgical or orthopaedic wards so we concentrated on delivery in the admission unit as all MS rotated through there.

Arranging a suitable venue was difficult due to the multi-user nature of the day-rooms in clinical areas and the fact that they were small and crowded- especially if more than six students were involved. This resulted in a delay to start times but students feedback remained positive.

Satisfaction rating: Clinical understanding: 96.5%, Learning about HCP 91.2% Session length & venue 98.2% Despite groups being mainly MS involvement rating was 100%

Discussion:
We were unable to recruit any other HCP groups as facilitators which could have improved IPE as a whole and enabled peer observation of facilitation. Despite this the results demonstrate this is a valuable and worthwhile process that will be further developed. This project highlights challenges of delivering sustainable, worthwhile IPE in a busy clinical environment.

References:
1. CAIPE (2006) CAIPE reissues its statement on the definition and principles of interprofessional education. CAIPE Bulletin 26 (3)
2. Shelvey B, Coulman S, John D (2016) Evaluating an undergraduate interprofessional education session for medical and pharmacy undergraduates on therapeutics and prescribing: the medical student perspective Advances in Medical Education and Practice 7: 661-70

Ref: 206, Board: E5
Inter-Professional Education

Simulating complexity: providing undergraduate students with exposure in early clinical training to the multidisciplinary management of frail older people.
JE O’Connell, J Hardisty, H O’Neil, R Hancock, R Lucas, L Parkin
Newcastle University

Background:
This project aimed to translate the clinical experience of the multidisciplinary frailty team into a classroom-based teaching session for undergraduate healthcare students. The implications of changing patient cohorts, in particular the rising number of frail older people with multiple co-morbidities and resultant polypharmacy, for the undergraduate and postgraduate training of healthcare professionals have stimulated substantial debate [1][2]. The objectives of the project were as follows:
• To simulate the complexities of management of frail older people in the classroom
• To assess the feasibility of delivering teaching and learning focusing on the care of older people and management of their medications in the early stages of clinical teaching
• To assess the attitudes and acceptance of students to inter-professional education and low-fidelity simulation as pedagogical methods for delivering teaching and learning around the care of older people
• To provide a preliminary indication of the knowledge and skills gained by students through this initiative.

Methodology:
Teaching sessions were developed, employing the pedagogical techniques of inter-professional education and simulation to replicate the complexities of managing frail older people in clinical practice. In the teaching sessions the students were in mixed groups of pharmacy and medical students and worked through two cases created to exemplify the most common characteristics of a frail older person patient cohort. Tasks included creating a problem list, medicine reconciliation, reviewing medication and producing discharge information. The facilitators were from both medical and pharmacy backgrounds to provide feedback and real world examples of working with the frail older person. A low fidelity ‘old age’ simulation suit was used to allow the students to attempt real life tasks from the perspective of a frail older person. These tasks included taking medication and making themselves a drink.

Feedback was obtained from the students through the use of paper questionnaires before and after the teaching session. The RIPLS (Readiness for Inter-Professional Learning Score) was used to assess how they felt about inter-professional learning. Free text comments were gathered regarding what the students felt that had learned during the session.

Results:
Feedback was obtained from the 64 students who participated in the project. Six themes emerged from analysis of feedback regarding what they felt they had gained from the session:
• Knowledge acquisition – particularly around medication use, monitoring and side effects in this patient group.
• Prescribing skills including how to determine the potential risks to a patient of a medication and balance them against anticipated benefits.
• NHS practices including processes and communication around discharge from hospital.
• Diagnosis and investigation skills
• Increased understanding regarding the multidisciplinary team.
• Professional and reflective skills including a deeper appreciation of the experiences of older people and the implications of reduced mobility/sensory impairments.

Students also fed back that they enjoyed working with students from another professional group, the case-based learning, the simulation aspects, the opportunity to apply previous learning to the cases, the relevance of the case to both professional groups and the multi-disciplinary facilitation.

Discussion:
This project demonstrates that it is feasible and acceptable to students to introduce the multidisciplinary management of frail older people in early clinical training. Future work will aim to address the logistical challenges, such as timetabling, in order to offer this opportunity to larger numbers of pharmacy and medical students and engage other healthcare professionals in training including nurses.

References:
Inter-Professional Education

Syllabus and Cquin - Using Interprofessional Simulation to Address Both Needs
A Foster, P Solanki
Princess Alexandra Hospital

Background:
There is a growing concern that education needs of our professionals may be sacrificed for meeting efficiency targets and other system wide pressures (1). Moreover, it is acknowledged that newly qualified doctors may lack preparation for a holistic approach in providing immediate care in medical emergencies (2) while their nursing colleagues lack access to continuing professional development through a gradual funding gap (3). Thanks to further funding from Health Education East of England we continued an Interprofessional simulation course aimed at learning from error for Foundation Trainees and nurses taking part in a locally run leadership programme. We targeted clinical learning specific to the needs of newly qualified Foundation Trainees and aligned these to current Trust initiatives relating to CQUIN targets-Sepsis, Acute Kidney Injury (AKI) as well as new Massive Blood Loss (MBL) pathways. We call this Simulation at Harlow for Foundation Trainees (SH4FT™).

Methodology:
The course runs for 1 day per month. Foundation doctors and nurses are rostered to attend as a part of their respective programmes. Scenario content is based on acute patient deterioration events using a high fidelity patient manikin. Focus is on patient assessment, management, communication and team work. Debriefing follows each 15 minute scenario with attention to learning outcomes relevant to both Foundation trainees and nurses that relate to clinical knowledge, compliance of pathways and human factors. Scenarios are linked to the Foundation Programme Curriculum (2016) and all faculty have attended simulation faculty training.

Results:
To date, 14 Foundation trainees and 6 nurses have attended 4 days. Post course evaluation looked at multidisciplinary working, discussion of non-technical skills and whether delegates would recommend this type of interprofessional learning method using a 5 point ordinal scale (1= strongly disagree; 5=strongly agree). Unsurprisingly given the small sample, there were no statistical differences across the 2 groups to the responses however the high mean scores support the argument that this learning is of benefit as a preferred learning method across professional boundaries.
A questionnaire was then sent to delegates 4 weeks following the course to evaluate what the opinions there were on working with other professions and what impact the learning had on clinical practice and what changes could be made to accommodate different learning styles. While in the early stage of analysis, the results are encouraging and support Kolb’s assertion of experiential learning (4).

Discussion:
We believe that the learning together nature of different professions allows a blended learning approach and that this enables delegates to understand differing professional approaches, priorities while achieving the same goal. With a growing demand to learn from error, we have begun to use content from Serious Incidents to script scenarios and use this form of learning to share wider learning across the organisation. These scenarios incorporate situations relating to Sepsis, AKI and MBL. Rather than mandate separate educational sessions for these CQUIN related initiatives, negotiating with working group leads has enabled attendance at this course to be acceptable in providing relevant contextual learning for these CQUINS. As such we are investigating the use of agreed pre course learning material sent to delegates based on our findings and this provides access to related learning other than the kinesthetic preference (5). Therefore the need to release staff from a busy clinical area unnecessarily is mitigated; reducing repetition in protected teaching for medical trainees and providing much needed professional development for their Nursing colleagues. This also enables same messages to be spread in an efficient way across professional groups.

References:
REFERENCES
(1) Sholl, S; Ajjawi, R; Allbut, H et al (2017) Balancing health care education and patient care in the UK workplace: a realist synthesis. Medical Education. 51; 787-801
(2) General Medical Council (2014) How Prepared are UK Medical Graduates for Practice? Final report from a programme of research commissioned by the General Medical Council. [accessed 12 December 2017]
Using case studies to test a model of education for health and social care staff that leads to patient benefit: a realist evaluation
S Corbett, J Illing, M Carter, A Kehoe, H Hesselgreaves, P Crampton, M Sawdon, M Swamy, G Finn, P Tiffin
Newcastle University

Background:
NHS investment in education and training of health and social care staff exceeds £40 million annually (UKCES). The process by which this investment is translated into improved patient care and outcomes is unclear. A model of learning transfer that benefits patients would provide a useful tool to inform the development and implementation of educational interventions. To be useful a model requires the delineation of contextual factors (C) and mechanisms (M) or processes that can be causally linked to outcomes (O). Such a model has been developed using a realist synthesis (Wong et al. 2014) of published literature (Illing et al. 2017). Our aim was to test this model in real NHS settings.

Methodology:
A purposeful sample of cases were selected to inform educational interventions aiming to address NHS quality indicators (Safety, Clinical Effectiveness, and the patient experience) in different contexts in acute care. The opinions of programme initiators, managers, educators, and staff were sought using a semi structured interview tailored to the role of the interviewee. Examples of contextual factors, mechanisms for change were identified to compare with and test our model. Published and internal reports pertaining to the interventions and data on patient outcomes (research, audits, and patient surveys) were also reviewed.

Results:
Each intervention had positive and negative experiences to report. Overall organizational climate, individual motivation, training relevance and quality, and the management of change in the clinical context were key indicators for effective implementation, maintenance, and spread of learning throughout each organization. The fit of the programme theory varied depending on the extent to which patient’s behaviour could influence outcomes. Patient safety in surgery was dependent on reducing health professional error, whereas patient adherence to treatment was strongly influenced by patient characteristics. Unsuccessful aspects of interventions provided support for the theory.

Discussion:
The model provided a good fit with practice and could be used to provide a framework for developing best educational practice in clinical settings. We are seeking to extend the model by testing it further in non-acute settings to examine generalizability to other healthcare contexts.

References:
UK Commission for Employment and Skills (UKCES)

Ref: 367, Board: E8
What makes interprofessional working effective?
G Sheiybani, P Fletcher
Gloucestershire Hospitals NHS Trust

Background:
Although doctors and nurses agree that they should work more collaboratively to enhance patient safety, the evidence suggests that this is not always observed in practice due to pressures within the working environment(1). There is some evidence that effective collaborative working is critical to patient safety(2). There have been some attempts at looking at ways to improve interprofessional learning (IPL) but the evidence is not very strong in understanding what is effective(3). Anecdotally, there are environments where interprofessional working is perceived to be the norm but is this actually the case? The aim of this study is to investigate whether teams in an environment which are perceived to work collaboratively actually do so (Critical Care) and compare this with an environment where they may not (Acute Medicine).

Methodology:
Semi-structured interviews were initially conducted by staff within critical care and acute medicine. The questions were formed based on the elements of successful IPL identified by Martin-Rodriguez et al(4). Critical care and acute medicine have been chosen as they look after a similar group of patients and have a similar staff structure. Quota sampling was the chosen strategy in order to obtain opinions and perceptions from all grades of registered nurses and doctors in both groups. The same questions were asked of both staff groups in critical care and acute medicine. They also included questions regarding their perceptions of each other in terms of IPL.

Results:
The semi-structured interviews and questionnaires are being analysed qualitatively and quantitatively and the results will be presented at the meeting.

Discussion:
Interprofessional learning and working effectively is required to enhance patient safety. Understanding what can be done in working environments to enhance this will help inform interventions within the workplace. The implications of this study’s results will be discussed at the meeting.

References:
The patients’ voice: why be a volunteer in medical student training? A mixed methods approach
A Myers, T Martinez, C Froud
Newcastle University, Northumbria Healthcare NHS Trust

Background:
Patient involvement is a key element of medical education (1) and ensures that students complete their studies not only with the required knowledge and clinical skill, but also compassion and an approach to holistic care. The aim of this study was to develop an understanding of the motivations of volunteer patients within the MBBS programme, in order to embed patient and public involvement in the future development of the programme.

Methodology:
Two methods were used. Initial focus groups were used to collect qualitative data regarding the motivations behind the volunteers’ involvement in medical education. Thematic analysis (2) of the data provided themes which then provided the topics for a questionnaire. The questionnaire was completed by a different set of volunteers at a later date in the academic year which allowed triangulation and corroboration between the 2 methods and volunteers. Inclusion criteria: participants were patient volunteers recruited to a Newcastle University Regional Medical School Base Unit.
Exclusion criteria: not a current volunteer
Ethical approval was gained from Newcastle University Ethics Committee.

Results:
Sixteen volunteers (56% female) participated in three focus groups and 30 volunteers (57% male) attending the MBBS MOSLER finals assessment completed the questionnaire (75% completion rate) - both groups of participants had experience of all 5 years of the MBBS programme.

The findings were:
• volunteer perceived benefit (see table 1 for quantitative data results)

Table 1: why do volunteers find it enjoyable being involved in medical education?

<table>
<thead>
<tr>
<th>Description</th>
<th>% of respondents</th>
</tr>
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<tbody>
<tr>
<td>Helpful for volunteers to learn about their condition</td>
<td>78</td>
</tr>
<tr>
<td>Stimulating</td>
<td>93</td>
</tr>
<tr>
<td>Exciting</td>
<td>95</td>
</tr>
<tr>
<td>Supportive staff members</td>
<td>96</td>
</tr>
<tr>
<td>Fun</td>
<td>96</td>
</tr>
<tr>
<td>Rewarding</td>
<td>96</td>
</tr>
<tr>
<td>Comfortable with students</td>
<td>100</td>
</tr>
<tr>
<td>Flexible in time commitment</td>
<td>100</td>
</tr>
</tbody>
</table>

• volunteer as an educator
When some of them were examining my knees I suggested they try a different way….& the student said “oh yes that’s easier”,…..the tutor that was with them said yes that was a good idea (volunteer G1M1)

• the wider context of the NHS
They are our future so we have to help teach them correctly… if we don’t then we are letting the NHS down (volunteer G2M1)

Volunteers perceived that they had a key role as educators and felt part of a community of practice within the education team. Volunteers suggested that they should be a “partner” in deciding generic skills required by future junior doctors rather than have a role in designing curricula detail.
- we need doctors that are natural, that can listen (volunteer G1F1)
- good analytical and communication skills, able to explain the condition and prognosis in a way the patient understands (Volunteer Q1)

Discussion:
Those who participated in the focus groups and those who completed the questionnaire found their involvement with medical education within the Northumbria Base Unit to be an enjoyable experience but also beneficial to both them and the students. A key element to the continued involvement of our volunteers in the MBBS programme
was their feeling of being a valued and equal member of the medical education team, that they felt part of a community (3) but also a sense of loyalty to the health-care assistants (TM,CF).

This study sought opinion from volunteers involved in all aspects of the curriculum not just from specialist areas - from clinical skills and communication skills training to acute simulation teaching and ethical dilemmas. The results are therefore generalisable to other UK medical schools. The volunteers have a vital role as educators within the education team and have clarified what they feel is an appropriate role for patients within a curriculum.

References:

Ref: 101, Board: E10
‘Protected clerking time’ – one-to-one teaching with consultants on AMU
D Chevalier, A Ball
Blackpool Teaching Hospitals NHS Trust

Background:
Clerking is an important skill for all doctors. It relies on clinical decision-making as well as a range of non-technical skills. Acute medical units (AMU) are rich learning environments, with the 2007 Acute Medicine Task Force(1) calling for AMU to become a core placement during training.
A survey of Foundation Year One (FY1) doctors at Blackpool Victoria Hospital (BVH) found less than 50% had previous clerking tuition. Just a fifth had guidance since starting work, despite a universal demand. Personalised feedback recognised by the GMC is an important and valuable part of educational supervision.
In the most recent GMC training survey(2), almost 80% of trainers worked beyond their rostered hours at least once a week. With a third mentioning their job plans did not include enough time to fulfill their roles as educators.
By looking at all medical rotas in BVH we developed a unique remodeling system with guidance from the Acute care toolkit 5(3). Creating an enhanced collaboration between all grades of doctors, this renovation allowed FY1s to have protected, personalised one-to-one clerking teaching with a consultant. This received heavy praise from trainees and trainers alike.

Methodology:
We set out to create a thirty minutes ‘protected clerking time’, free from jobs or pagers. All medical rotas were analysed and a suitable slot was devised. The program was set 6 months into the FY1 year to eliminate time pressures of an unfamiliar system.
In BVH the on call consultant commences a post-take ward round at 17h on AMU with the FY1. Instead, we had the senior house officer (SHO) join the consultant. Neither held the ‘crash bleep’. A two-week trial was agreed with the AMU department lead. Consultants, SHOs and FY1s were emailed prior but also directly contacted in the morning to best prepare for the slight change.
A five point Likert questionnaire with free text was given to FY1s and consultants pre and post ward round and verbal responses collated from SHOs.

Results:
This initiative received resoundingly positive feedback. 90% of FY1s welcomed the advice from consultants, with 80% stating the experience had exceeded expectations. When asked if the session was useful, 40% agreed and 60% strongly agreed. Most impressive, FY1s unanimously requested for a repeat session and for it to be a permanent feature.
Consultants also reported back favourably. Unanimously believed to be beneficial for FY1s with all consultants agreeing that the protected time for FY1 is useful. 75% agreed strongly that this should be a permanent feature on AMU. Free text comments reported that it ‘should be available to all juniors’ and that ‘it should be enrolled across’ all specialties.
Co-incidentally SHOs involved also valued the time with the consultant on-call as they were able to post-take patients giving them personalised feedback also.

Discussion:
This positive response was extremely encouraging. Work-based learning is vital to a junior doctors development but in these challenging and uncertain times education can be forgotten. Though this initiative shows that intelligent rota design can deliver high-quality teaching. This has a direct impact on patient safety and quality of care.
The GMC ‘promoting excellence standards’ asks for protected teaching. What is clearly shown here is a simple yet effective solution to providing great teaching, without the addition of extra sessions or putting more strain on to an already busy workload. As such, despite quite a young project, it was nominated for Quality Improvement Project of the Year in BVH.
Economically, this project brought no additional cost and required no props. Patient care was maintained and with the surprise positive feedback from SHOs, such a programme should become permanent in BVH. This project took into account local and national concerns regarding training and devised a system we believed should be incorporated not only regionally but nationally.

References:
A near-peer approach to delivering foundation year teaching
O Anyiam, K Jobling, P Burnell, M Taberham, S Maitra
Newcastle Upon Tyne Hospitals NHS Foundation Trust

Background:
Near-peer teaching (NPT) is defined as “the phenomenon whereby senior trainees (one or more years senior in training on the same level of the medical education spectrum) teach more junior trainees”(1). The main attraction of NPT is that it can benefit the training of the tutors as well as the learners. Medical trainees involved in NPT are provided with more opportunities to teach and therefore develop their teaching skills(2) in addition to improving their communication skills(3).

The General Medical Council (GMC) encourages all doctors to contribute to the teaching of their junior colleagues(4) and indeed this is a requirement in most postgraduate medical training curricula. All training hospitals in the UK provide foundation year doctors with a generic teaching programme which are mostly delivered by consultants. Employing a near-peer approach to such teaching programmes could create a wealth of opportunity for medical trainees to meet the requirements of their training curriculum. However, some scepticism exists regarding the quality of such teaching in the undergraduate setting(1,5).

At Newcastle upon Tyne Hospitals NHS Foundation Trust, the foundation year teaching program is delivered exclusively by postgraduate medical trainees. The aim of this study was to determine the usefulness of teaching delivered by our medical trainees from the perspective of the foundation year doctors.

Methodology:
The mandatory teaching program for the second-year Foundation Trainees (FY2s) is delivered exclusively by core trainees of varying specialties. Now in its third year, the 2017/18 academic year is the first year in which attendance for the foundation year doctors is mandatory. Sessions are conducted every other Wednesday at both of the two main hospital sites.

Evaluation data have been collected in the form of questionnaires consisting of seven questions with a 5-point Likert scale. In addition, focus groups have been conducted to gather more detailed feedback about the benefits and disadvantages of the teaching programme.

Results:
The full evaluation results of the program will be presented in detail, however preliminary data have been obtained. In this academic year, fourteen sessions have occurred receiving an average attendance of approximately 16 FY2s. To date, 100 evaluation forms have been collected. 97% and 92% of attendees 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. Additionally, 87% agreed/completely agreed with the statement “I would recommend this session to other FY2s” and 78% agreed/completely agreed with the statement “the session advanced my knowledge of the topic”.

Only 10% agreed or completely agreed with the statement “I would prefer if this session was taught by a consultant” and only 12% agreed or completely agreed with the statement “the teaching was pitched at a level that was too basic”. Focus groups are yet to be conducted.

Discussion:
The evaluation results from the first eleven sessions suggest that a near-peer approach to delivering foundation year teaching could be viable. The data received so far suggest that our FY2s find their senior colleagues knowledgeable and the teaching relevant to their practice. Despite the scepticism regarding the suitability of trainees to deliver effective teaching, our FY2s overwhelmingly preferred the sessions to be delivered by their colleagues and disagreed with the notion that the teaching was too basic.

Given the requirement of junior doctors to develop their teaching skills, our data suggest that a near-peer approach to delivering foundation teaching can help meet this requirement without compromising the learning of foundation year doctors. We call for the proliferation of similar programmes to evaluate the usefulness of NPT in other postgraduate settings.

References:
An audit of poster design at a national medical education conference for trainees and medical students: an opportunity for improvement
E Wooding, K Stevenson, S Zhou
Royal Devon and Exeter Hospital

Background:
Academic posters are commonly used within healthcare academia as a method of knowledge transfer. Posters may be formally presented or left visible for delegates to view independently. They demonstrate a summary of a topic in an easy-to-digest way. Some objectives of presented posters are to capture the attention of delegates, to generate interest in the topic and to put across information regarding the project or intervention in a clear and succinct manner. Successful poster presentation derives professional benefits including the possibility of winning prizes and increased points in clinical and academic job applications.

Methodology:
An audit was performed of all posters presented at a national medical education conference, MedEdExeter17, a one-day conference attended by junior clinicians and medical students from the United Kingdom in November 2017, run by a regional branch of Trainees in ASME (TASME). 23 posters were included and assessed by two raters using a previously derived modified checklist for scoring academic posters. The checklist assessed a range of criteria focussing on readability, coherence, style, appropriate referencing and use of images. General style guidance had been provided to poster presenters on announcing their successful abstract submission.

Results:
Of 23 reviewed posters, the two raters agreed on all points when marking posters independently. The majority of posters demonstrated good grammar and spelling (91%; 21/23) and natural progression in design allowing ease of reading and natural eye movement (87%; 20/23). Only 18/23 (78%) of posters contained references and a moderate number of posters were readable from 2m distance or used an appropriate typeface (70%; 16/23). Only 9/23 (39%) of posters contained contact details for the presenters and of the 15 posters containing images, only 3 attributed their images appropriately (20%).

Discussion:
Variable poster quality was noted by our audit, this was particularly poor in relation to designing posters which are readable, meeting copyright guidelines, where the presenters are easily contactable and most surprisingly in relation to referencing, which was absent in 22% of cases. Gopal et al found that only 10% of posters met all criteria at a large international medical education conference. However, at our smaller event we found that no presenters met all these criteria, in spite of providing additional guidance on ideal poster style in advance. This difference may be partially accounted for by the more junior level of presenters at our event, which was aimed specifically at students and junior trainees. Firm guidance on poster content, communicated in advance and linked to poster marking and prize awarding score sheets may be beneficial in promoting quality posters. Further exploration of presenters’ training and knowledge about poster design and its role in the knowledge transfer process would be useful as an area for further research.

References:

Ref: 226, Board: F3
Desperate to learn: Do junior doctors improve their urological knowledge and skills during the UK Foundation Programme?
S Smith, E Osen
Addenbrooke’s Hospital, Cambridge, UK

Background:
In the UK, medical graduates currently complete a two-year period of employed training (the Foundation Programme) prior to application and selection to onwards speciality training. Continuous improvement in professional, clinical skills and acumen is set out in the Foundation Programme curriculum (1). Regardless of career intention, basic management of urological problems is an expected competence of junior doctors, as urological complaints are common in both the acute setting and the community. We aimed to evaluate whether urological knowledge and confidence in clinical skills improve between year 1 (FY1) and year 2 (FY2) of the Foundation Programme.

Methodology:
A 25-question survey was distributed (available both as paper and online forms) to FY1 and FY2 doctors working within a single, large Foundation School deanery in the UK in September 2017. Participants were assessed on knowledge of key urological presentations through 5 single best answer (SBA) questions, designed to reflect core competency at Foundation level. They were asked to self-report their confidence in management of basic urological problems, 5 key urological procedures (male and female urinary catheterisation, three-way catheter insertion, bladder washout and irrigation, and suprapubic catheter change), and 2 key urological examinations (digital rectal and male genital examination), using a 10-point Likert scale.

Results:
78 completed questionnaires were received, representing 44 FY1 and 34 FY2 doctors. The mean SBA score for FY1 doctors was 46.4%. FY2 doctors scored significantly higher than the FY1 doctors (p<0.05, unpaired t-test), with a mean score of 59.4%. FY2 doctors had correspondingly higher self-reported confidence levels in managing basic urological problems than FY1 doctors (p<0.05) at 6.03 versus 4.98 (out of a maximum of 10), respectively. Whilst FY2s reported higher confidence levels across all 5 procedural skills than FY1s (p<0.05), absolute confidence levels for three-way catheter insertion, bladder washout and suprapubic catheter change remained low with FY2s self-reporting confidence of 5.5, 4.3 and 3.2 out of 10, respectively. There was no significant difference in confidence levels reported by FY1s and FY2s for digital rectal and male genital examinations.

Discussion:
Our study demonstrates that practical urological knowledge and confidence improve amongst junior doctors during the Foundation Programme. However, confidence in performing core urological procedures is low uniformly and this could be addressed in the future with practical teaching sessions targeted at both undergraduates and Foundation doctors.

References:
Developing and evaluating an annual medical education conference via a regional trainee medical education branch
E Wooding, K Stevenson, S Hodgkinson
Royal Devon and Exeter Hospital

Background:
Academic trainees in Devon have historically run an annual, national medical education conference in Exeter, since 2012 but had not run in 2016 due to lack of local enthusiasm. A group of junior trainees with an interest in medical education resolved to revive the conference and incorporate it into the South West Peninsula TASME branch in an attempt to assure on going sustainability. Academic conferences in medical education provide opportunities for students and trainees to explore medical education career paths and are important sites for networking, collaboration and information sharing. This abstract details the design and evaluation of a medical education conference aimed at students and junior trainees.

Methodology:
A committee was formed and links with stakeholders established, including trainee and senior faculty from national and local medical education organisations. Four junior clinical trainees were recruited to perform the bulk of organisation. Feedback from previous events was reviewed, and local trainees and students were consulted to shape the format and content of the event. A one day event was planned with a keynote speaker and two further lecturers, alongside optional workshops and poster presentations accepted via submitted abstract. Two prizes were available for best posters, marked by one expert rater. A feedback questionnaire with both quantitative and qualitative components was developed as an adaptation of the ASME ASM 2016 feedback form and details given to all attendees via their delegate packs.

Results:
46 delegates attended the conference and we accepted 25 posters for presentation. 23 of the accepted posters were displayed on the day. Feedback was collected following the event via an online questionnaire service. 29 people (63%) completed the post-conference feedback survey. Feedback was completed by nine undergraduate students. 10 foundation trainees, 7 specialist trainees, 2 clinical fellows and 1 consultant. Of these 21 (72.41%) were actively involved in providing medical education at present, ranging from informal bedside teaching, to substantive posts, higher degrees and commercial education endeavours. Themes in qualitative feedback were explored. When asked “what was good?” 29 participants gave free text comments. Of these 19 and 16 liked the lectures and workshops respectively. 8 people valued the role the conference had played in exploring their career plans and goals. Other positive themes included logistics (venue, catering, organisation), non-threatening environment. Only two people specifically mentioned the poster presentations.

When asked “what could be improved?” 23 participants gave free text comments. Most common themes were participants wanting the opportunity to attend more than one workshop (6/23), clearer guidance on workshop content prior to signing up (4/23), improved publicity and/or collaboration to enhance attendance (4/23) or changes in content of lectures or workshops (3/23). Further specific feedback was sought on specific aspects of the day, including individual lectures and workshops, which will be presented.

Discussion:
The data demonstrates that the event was broadly well-received and valued. It enabled delegates to explore career opportunities in medical education, to hear expert speakers on contemporary themes in education research, to present their academic work and to network. The feedback suggests that an on going annual conference in this format would be welcomed, and feedback will be incorporated into the planning of future events. Attention to early publicity to enhance attendance, further attention to workshops – ensuring participants can maximise their opportunities to attend and that the objectives of these workshops are clearly communicated in advance, and improving feedback response rates, are areas of improvement. Engendering the organisation of the conference in the academic trainee and local TASME calendar to ensure sustainability is also fundamental.

References:

Ref: 254, Board: F5
Developing and Supporting Overseas Doctors – Half a decade on
M Ng, K Hunjan, T Howe, S Williams, B Clarke, T Lasoye
King’s College Hospital NHS Foundation Trust

Background:
International Medical Graduates (IMGs) play a crucial role in the NHS, particularly in obstetrics and gynaecology, paediatrics and psychiatry(1). With 37% of UK doctors obtaining their primary medical qualification overseas(1), a London teaching hospital devised an Overseas Doctor Development Programme of learning to focus on the challenges encountered by IMGs such as unfamiliarity with UK systems, communication and cultural differences and career development(1, 2). The Programme, which has been running since 2013, consists of regular weekend teaching days, freely available to all IMGs including Staff and Associate Specialist Grade (SASG) and trainees within the Trust. With IMGs feeling increasingly alienated and unwelcome(3), there needs to exist a supportive framework to provide induction and pastoral care, in addition to being a safe space for discussion. A key tenet is to align the IMGs’ existing values and beliefs alongside those expected in the NHS, facilitating their transition to working in the UK.

Methodology:
The key component of the training is the utilisation of a diagnostic approach in identifying the IMG’s learning needs. The day consists of three workshops delivered by senior doctors. The anonymous feedback from previous sessions helps drive learning objectives for future courses. The programme is distinct from generic training as it provides a forum for IMGs to be open and honest about their challenges and difficulties. Crucially, the faculty have many areas of expertise which assist in tailoring the sessions to the group and takes advantage of the faculty skillset.

Results:
Four sessions were delivered throughout 2017 with a range of 8-16 participants (mean 12) for the sessions. They were attended by a mixture of Foundation Year doctors, Trust Grade, Junior Clinical Fellows & Clinical Fellows across all hospital specialties.
The various topics that have been covered in 2017 are:
- ‘Watching out for Pitfalls & Opportunities’ – highlighting DNACPR and palliative care, adverse events, safeguarding and legal aspects
- ‘Mind & Body: Looking after both’ – focus on career, presentations and mental health in the workplace
- ‘Developing Generic Professional Capabilities’ – Child/Adult safeguarding & Domestic Violence
- ‘Managing Acute Presentations’ – Trauma, Women’s Health & Renal scenarios
Overwhelmingly useful ratings from the sessions have been gleaned; 89% - 100% rated the course ‘excellent’ with the remainder rating this as ‘good’.
Feedback comments have been universally positive with ‘take home’ points covering a variety of domains:
- “…Really increased my knowledge about the medico-legal implications in UK health system”
- “…I realised I wasn’t the only one going through these difficulties…”
- “…Specifically enjoyed open environment of tangent discussions…”
- “…Very helpful to know we have this level of support.”

Discussion:
Over the last half a decade the profile of the programme has been steadily increasing. Through poster distribution, an online presence and word-of-mouth, dissemination has taken place through education and clinical leads to take us to this point.
Following feedback from candidates, who have shared feelings of isolation and lack of support in the workplace, the faculty who comprise of a number of IMG senior doctors now openly share their personal journeys. Given the prevalence of IMGs nationally, there is scope for this course to be standardised, centralised and offered to a wider network of IMGs.

References:
3. Tonkin, T., In fear of a racist revival, BMA news, May 2017
Developing Foundation Year 1 Doctors Leadership Skills in the Workplace through Mentoring and a Weekly-Teaching Programme
C Lau, N Vigneswaran
South Warwickshire NHS Foundation Trust

Background:
Medical leadership plays an important role in the modern NHS and has been integrated into the foundation programme curriculum. Foundation Year 1 (FY1) doctors are expected to demonstrate effective leadership, decision-making and team working skills (1). The goal is to ensure that FY1s are better equipped with leadership skills in preparation for senior roles, when they will be expected to have more leadership engagement. Despite the introduction of the Medical Leadership Competency Framework (2) (MLCF), leadership engagement amongst junior doctors remains poor. This is partly due to lack of awareness and the fact that junior doctors often underestimate their ability to influence change (3). This educational programme aims to raise FY1s’ awareness of medical leadership and to develop their leadership skills. This will be achieved by focusing on the ‘demonstrating personal qualities’ and ‘working with others’ domains of the MLCF (2).

Methodology:
This educational programme consists of weekly workshops and mentoring, from December 2017 to March 2018. The weekly workshops are integrated into the local FY1s’ compulsory teaching programme. Each session will be facilitated by a clinical education fellow (CEF) and will last for one hour. Workshops will cover topics including introduction to leadership, developing communication skills (handover and making referrals) and introduction to teaching skills. FY1s will have the opportunity to discuss difficult cases, ethical dilemmas and other issues during ‘forum’ sessions.

The concepts introduced in the workshops will be reinforced by mentoring. Each FY1 is allocated to a CEF mentor, all of whom would have completed the foundation programme. CEFs are available to meet up with their mentees impartial at the start and throughout the rotation as needed. The role of the CEFs is to provide extra support to the FY1s, which can range from providing advice on clinical work to guidance on their professional development. CEFs will encourage FY1s to reflect on their clinical practice regularly. At the end of these meetings, the mentor and mentee will form an action plan using the SMART criteria (4).

FY1s will be asked to complete questionnaires at the start and end of their rotation, to assess for changes in their confidence in demonstrating leadership skills. Questionnaire items are mapped to the MLCF (2). Mentors will also carry out structured interviews with their mentees mid-block and at the end of the block to assess for learning and to identify barriers to learning.

Results:
Interviews will be conducted late January 2018 and March 2018 respectively. The post-programme surveys will be collected at the end of March 2018. Results will be presented at the conference.

Discussion:
Current evidence shows that the reasons for poor leadership engagement amongst junior doctors are multifactorial. Firstly, lack of awareness and the notion that leadership is seen as a quality only those in a designated role can exhibit plays a substantial role (5). Further to this, heavy workload and clinical-managerial divide contributes significantly as well (6). This educational programme aims to tackle these challenges by integrating into the FY1s’ compulsory teaching programme. However, as FY1s have to meet up with their clinical and educational supervisors regularly, some may encounter difficulties with finding time to meet up with their mentors. Nevertheless, there is no data to suggest the optimal frequency of meetings and one could argue that the duration of these meetings are more important (7).

Studies have shown that higher leadership engagement is associated with improved patient experience, clinical outcomes, staff morale and motivation as well as reduced errors, mortality rates and stress levels (8). The use of questionnaires and interviews will assess as to whether this educational programme will increase the FY1s’ knowledge and skills of medical leadership and/or lead to changes in their behaviour (9).

References:

Ref: 309, Board:F7
Negotiating the Transition from Student to Clinician: A Phenomenological Exploration of the Experience of Clinical Entrustment

K Rankin, H Cameron, A Jaap
University of Edinburgh

Background:
Making the transition from medical school graduate to junior doctor is undoubtedly one of the most challenging moments of a medical career(1). It necessitates an increase in the level of entrustment and clinical responsibility devolved to the junior doctor(2,3). Due to the importance of this transition, the literature on graduate preparedness has been growing(4). The majority of this literature is questionnaire-based: quantitative in nature and attempting objective measurement of self-reported preparedness(5). The adoption of this approach is understandable; it allows for measurement of improvements following curricular developments(6), comparison across different types of undergraduate medical curricula(7–9) and follow-up of trends in consecutive cohorts(10,11). However, this epistemological stance could be considered to reduce this challenging process of identity transformation - in the context of a high-pressure and high-stakes work environment – to a point on an ordinal Likert scale. Exploratory, qualitative data on this subject is therefore necessary to enrich this body of literature. Our research aims to provide a detailed exploration of how the individual graduate actually experiences clinical entrustment and negotiates the transition to clinical practice.

Methodology:
The methodology employed to provide this exploration is that of interpretative phenomenological analysis (IPA) as described by Smith(12). Using purposive sampling, 4 recently qualified doctors working in South East Scotland were recruited. Semi-structured interviews were carried out with these participants 6 – 8 weeks after commencing their first clinical post to allow them time to reflect on the process of transition and their changing understanding of ‘being trusted’. Recordings were transcribed verbatim by the researcher to allow a semantic level of analysis and are currently undergoing analysis using IPA. In order to evidence our rigour an additional auditor will review the analysis – not for the purpose of imposing their own interpretation but to review for discrepancies or overstatements. Our sample will also be appropriately situated; the life circumstances of the research participants being described in a non-identifiable way.

Results:
Results of our detailed, idiographic analysis will be presented. We will highlight the insights generated into the process of transition and experience of clinical entrustment for these participants. These will be presented alongside hypotheses of how this understanding may be utilised and transferred to the future preparation of our medical graduates.

Discussion:
The results of this study will develop our understanding of the experience of the transition from medical student to junior doctor - and the attendant increase in entrustment - in a qualitative, exploratory way. Using this approach will complement and enrich the pre-existing quantitative literature on this topic. As a practising clinician, the findings are likely to be influenced by the previous experience of the researcher. IPA accepts that the researcher has a dynamic and active role in the research and that the fore-structures and assumptions they bring to the development of the research and interpretation of results cannot be bracketed(13). To ensure transparency of analysis, descriptions of theoretical orientation and personal assumptions were recorded in advance and detailed field notes kept during the data collection and analysis phase. These will also be acknowledged and the resultant impact discussed reflexively. The idiographic nature of IPA undoubtedly constrains the generalisability of our findings. However, the aim of this research is to explore reality for these participants in their context and therefore generalisability is not our research goal. Exploring the essence of this experience for these individuals may however generate insights, which we may then be able to take forward to enhance the future education and preparation of our medical graduates.

References:


PACES 2020: Updating a clinical skills examination to better reflect clinical practice
A Liiv, K Dagg, A Patrick, D Farquhar, E Murphy, K Berkin
MRCP(UK)

Background:
MRCP(UK) conducts regular reviews of its examinations and the methodologies used to assess the knowledge and skills of internal medicine trainees. Core clinical skills, including communication with patients and the examination and clinical evaluation of patients, remain fundamental to the delivery of high quality patient care. nPACES introduced an uncompensated skills-based marking scheme to the examination in 2010. SLWG was commissioned in 2015 to carry out a root and branch review of the structure and content of the MRCP(UK) nPACES examination. The purpose of the review was to ensure the examination reflects changes in postgraduate medical education and training, and that it remains relevant, fair, and fit for purpose a decade after nPACES was implemented.

Methodology:
An initial review of key literature on clinical skills examinations was conducted. This informed the activities of the SLWG convened in August 2016 to review nPACES and submit a report with recommendations. The group comprised members of the Clinical Examining Board, senior examiners from the three physicians colleges, clinicians working with JRCPTB, psychometricians, and MRCP(UK) staff. The working group was asked to:
• consider all aspects of the current structure and content of PACES to ensure a valid and reliable exam that tests the right knowledge and skills
• develop an assessment that delivers the best possible clinical examination that achieves a balance between academic and operational ideals.
• ensure that changes in postgraduate medical education and training from reports including Shape of Training, the Future Hospitals Commission and the introduction of the generic professional capabilities are reflected in the assessment.
• maintain the relevance of the assessment for physicians training and working outside the UK.

Two proofs of concept studies examined the validity of initial proposals made by the group during the course of its discussions.

Results:
The literature review demonstrated that PACES fits well into the general principles for running OSCE-style examinations and provided a justification for the structure used in the examination.
Discussion at the first three meetings of the SLWG identified the strengths (e.g. the use of real patients, two independent examiners assessing candidates in each encounter) and weaknesses (e.g. artificiality in some encounters, uneven contribution to overall mark by some examiners) of the examination in its current format. This was used to consider how the existing model could be modified, by integrating skills in more stations and changing the time allowed for different encounters. The feasibility of these proposed changes to the encounters was evaluated at two successful proofs of concept studies, using volunteer candidates and real examiners. The final meeting discussed the outcome from these studies and made recommendations for developing the exam. Consideration was also given to how to link these changes to the GMC Generic Professional Capabilities, the new Internal Medicine curriculum, and increase lay involvement in the examination.

Discussion:
MRCP(UK) envisages that explaining the work of the PACES 2020 SLWG demonstrates the complexity of designing and developing a high-stakes examination that is both reliable and valid.
The group made a range of recommendations for changing the examination:
• The five-station, eight-encounter carousel will be retained, and the four physical examination encounters should remain in their current format;
• Two 20-minute clinical consultation encounters will be introduced at Stations 2 and 5, with two 10-minute communication and ethics encounters. The latter will no longer include a candidate/examiner interaction;
• The non-compensated skills-based marking scheme will be retained, with further work to be undertaken to investigate any additional changes.
MRCP(UK) approved these recommendations, and a plan is being developed to pilot the new examination structure.
References:
JRCPTB, 2017, “Curriculum for Internal Medicine Stage 1 Training 2018, draft v16”
Ponnamperuma, GG., Karunathilake I., Mcaleer, S., Davis, M., 2009 ”The long case and its modifications: a literature review” Medical Education 43: 936-941
Wass, V., Van der Vleuten, C., 2004, “Standardised or real patients to test clinical competence? The long case revisited.” Medical Education 38:1176-1180

Ref: 183, Board: G1
Perceptions of Reflection: A Peer Teaching Intervention for Speciality Registrars in Geriatric Medicine
R Oates, E Pickavance, R Parikh
Royal Bolton Hospital, Royal Oldham Hospital

Background:
Reflection is stressed throughout training - trainees make reflective entries in their portfolio and submit reflective assignments for higher degrees. When done well, reflection can transform understanding. However, tutors and learners (MSc in Geriatric Medicine, Salford University) reported a lack of success with reflective assignments. Therefore, two speciality registrars devised an action research project to improve their peers’ reflective writing.

Methodology:
North-West region registrars completed a questionnaire exploring reflective writing. Likert scales sought to self-rate confidence/experience and free-text areas explored the ratings. A qualitative data coding frame was created. Learners attempting a reflective assignment sent this to two peer registrars (who had previously completed the module) for analysis. Wald et al’s REFLECT rubric was used to assess reflective capacity1.
The data informed the creation of a reflective writing workshop at the MSc induction day. Facilitated by a registrar, examples were analysed and reflective writing models taught. Post-workshop, a questionnaire explored perceptions and REFLECT used to analyse assignments.

Results:
Pre-workshop: 22/31 questionnaires were returned. Most could define reflective practice, however answer sophistication varied.
- 50% of respondents were daunted by reflective writing. Learners found it “difficult to put into words”. This was attributed to problems structuring work. Learners found reflecting “easier when face to face” or as part of a discussion.
- Polarised opinions regarding the utility of reflection emerged. Positive descriptors included: “enables self-development”; “allows self-awareness”; and an “essential skill”. A significant minority were sceptical: “no use, no point”; “woolly”; and “unscientific”.
- Considering Geriatric Medicine, most learners acknowledged the role of reflection: “Geriatric medicine by definition is complex with ethical, social, psychological aspects to care which is not straightforward, not evidence-based and needs discussion/reflection.” However, negative views included: “it’s a waste of time and has created a generation of doctors who are not scientific and are touchy feely”.
- Trainees’ wanted the teaching intervention to include examples of reflective assignments to analyse and reflective models to aid their writing. A few learners were not keen on a workshop - one striking quote read: “a gun, noose and a knife - take your pick!”
Three MSc assignments were analysed using REFLECT. The peer assessors felt candidates were unfamiliar with reflective frameworks. Overall, assignments were descriptive (but not reflective).
Post-workshop:
29 questionnaires were submitted. Learners had an improved understanding of how to write both reflectively and ‘academically’.
- Trainees reported: “greater understanding of reflective cycles and how to use them”; the need to “use literature and evidence to support” arguments and “that reflection doesn’t have to be touchy feely”.
- Teaching frameworks improved reflection’s perceived relevance and academic rigour: “encourages an analytical view”; “more scientific less woolly”; “it’s more than about feelings”; and “reflective frameworks can be used to identify problems and help deliver solutions”.
- Two assignments post workshop were analysed with REFLECT. Deeper reflection and clearer structure was evident.

Discussion:
Learners lack understanding and confidence when writing reflective pieces. Perceptions of reflection were polarised but we felt that this peer-teaching intervention helped improve the perceived utility of reflection. Reflection may be perceived as ‘woolly’. It is important to stress that academic rigour, the ability to analyse a problem and create a solution are qualities that a piece of reflective writing can foster. Such attributes are important in when approaching complex decision making in ‘real-life’.

References:
Prescribing for Overseas Doctors (PrOD)
A-M Hall, J Docherty
North Tees and Hartlepool NHS Trust

Background:
Medicines are the most commonly used clinical intervention in healthcare, and errors involving the prescribing of these are common, leading to prolonged hospital stay, significant patient morbidity and even death. Each year in England alone, the cost of preventable harm from medicines has been estimated at £750 million. Trainees’ lack of experience in completing prescriptions before they start work is a well-recognised problem. The GMC revised their core guidance for medical education, Tomorrow’s Doctors, to recommend that formal prescribing skills training and practical experience in the NHS be provided for medical students. Prescribing training is provided for medical undergraduates and foundation trainees in the UK. Support and assessment is provided through the two years of the foundation programme. This is not provided for Trust doctors or doctors from overseas. With an increasing workforce from abroad, a process must be in place to ensure the safety of medications and prescribing and therefore the safety of our patients.

Methodology:
This project will expand on the Trust’s Programme for Overseas Doctors (POD) in addition to building on the medicines optimisation initiative. The programme would mean we have a robust method of engaging our non training grade doctors. A training package will be developed, the content linked to measurable outcomes and can be transferable to other trusts within the region and nationwide. We will be using simulation teaching (which is well established in our trust) as part of the training package. The training package will be used to update prescribing skills of Medical Training Initiative doctors (MTI), staff grades and speciality doctors as part of continuing professional development. Many in this group of doctors are from overseas and will very much benefit from this programme.

Results:
Project is still on going. However, initial results show that the legality of controlled drug prescribing is misunderstood, as well as the antibiotics that are appropriate for penicillin allergic patients.

Discussion:
Project is still on going

References:
1. Kehoe A et al. 2016. ‘Supporting international medical graduates' transition to their host-country: realist synthesis.’

Ref: 022, Board: G3
Proactive Care of Older Persons undergoing Surgery (POPS) training during a transitional training course for surgeons.
T Walker, A Crees, P Fernando, N Bashir, J Coulston
Severn School of Surgery

Background:
Proactive Care of Older Persons undergoing Surgery (POPS) has been piloted in our region in response to the 2015 National Emergency Laparotomy Audit (NELA). Run by a team of Geriatricians at Musgrove Park Hospital in Taunton, the initiative encourages collaborative working in Colorectal and Upper Gastrointestinal Surgery, to improve the care of older/frailer patients, particularly those requiring emergency laparotomy. Training of surgical teams to accurately assess multi-morbidity, frailty and cognition in all patients aged over 70 years is imperative to tackle higher morbidity and mortality rates in this group. We present the structure, learning objectives and impact on trainee confidence levels of POPS training delivered during a Core Surgical Training induction course.

Methodology:
The Severn School of Surgery runs induction "bootcamps" that provide technical and non-technical skills training for doctors making the transition between Foundation Year and Core Surgical Training. Four workshops, facilitated by the POPS team, were provided during day one of the bootcamp in August 2017. Learning objectives were: 1. Frailty, polypharmacy and anticoagulants, 2. Delirium assessment and management, 3. Fluid management, analgesia and anti-emetics, 4. Treatment escalation plans and end of life care. Questionnaires pre- and post- bootcamp were provided with a 5 level likert scale interrogating familiarity of trainees to issues surrounding the care of older patients undergoing surgery. Feedback forms for the workshops were also completed with agreement ratings 1(strongly disagree)-5 (strongly agree). Agreement data were reported as the weighted average score for each question. Where appropriate, data were analysed using t-tests with level of significance set at p<0.05.

Results:
26 trainees attended the POPS training workshops. There was a significant increase in trainees’ familiarity of the issues surrounding the care of older persons undergoing surgery (p<0.001).
Trainees agreed that they felt more confident in their ability to manage an older person undergoing surgery (4.88). Trainees agreed strongly with the relevance of the learning objectives (4.81), felt that they had knowledge acquisition (4.62), agreed the workshops made them feel more prepared to perform at Core Training Level (4.76), enjoyed the workshops (4.69) and agreed the workshops were delivered in a useful way (4.81).
Trainees felt that the POPS workshops were “useful”, “very relevant”, “informative” and “helpful”.

Discussion:
Several regional trusts are piloting POPS services. Delivering POPS education for surgical trainees is felt as an important step in addressing both the increased numbers of older persons undergoing surgery and the increased morbidity and mortality in this group. Positive feedback was achieved during this first year of workshops integrated into an established core surgery bootcamp. Trainees’ familiarity of issues surrounding the care of older persons undergoing surgery significantly improved following training.

References:

Ref: 014, Board:G4
Simulations training during an induction bootcamp and its relevance to clinical practice.
B Rybinski, J Pascoe, O Beaumont, T Walker
Musgrove Park Hospital

Background:
Commencement of Core Surgical Training (CST) means an increase in responsibilities, higher clinical expectation and greater involvement with other specialities. Core trainees find themselves performing roles which they may not be used to and applying skills which they may not be confident in. Modelled on pioneering success (1, 2), the Severn School of Surgery has developed over the last 3 years its own CST Boot Camp. We have set out to assess whether the simulation training delivered on this course is aligned with trainees personal and workplace needs.

Methodology:
The Severn Deanery’s CST Boot Camp runs over 3 days and focuses on technical and non-technical skill acquisition in line with ISCP requirements and feedback from previous years. Simulation training techniques are used to equip trainees with skills necessary to carry out their day-to-day duties, such as: leading a ward round, assessing post-operative patients and making cross-speciality referrals, as well as practical skills allowing them to cross-cover a range of surgical specialties. Perceived training needs and predicted workplace requirements were assessed using a pre- and post-boot camp survey, as well as a follow-up questionnaire issued 5 months after completion of the boot camp exploring how frequently the described skills were subsequently tested.

Results:
The pre- and post-boot camp surveys were completed by all 24 trainees. 19/24 (79%) of trainees completed the follow-up survey.
Prior to the boot camp 50% of trainees felt confident in leading a surgical ward round, compared to 92% following it. 5 months later, 78.94% felt the course improved their ability to lead a ward round. In this period 3 trainees (15.79%) never had to lead a ward round and majority led it on average between 1-5 times a month. All trainees agreed that simulation teaching on leading a surgical ward round was relevant to their practice.
94.74% of trainees responding at 5 months felt that the boot camp improved their abilities in managing a post-operative patient. In this time all of the trainees have regularly assessed post-op patients, with over half of the respondents assessing over 20 patients in an average month.
89.48% of trainees felt the boot camp improved their ability to manage a trauma patient. At 5 months since commencing CST all trainees felt that the simulated session on trauma management was relevant to their current practice.
The boot camp improved confidence of 84.21% of trainees in managing epistaxis and tracheostomies. All trainees stated that the simulated ENT session was relevant to their practice despite that only 42.1% of trainees had to manage ENT patients during on calls.
All trainees stated that simulation teaching on specialty referrals was relevant to their practice. 84.21% of trainees felt that training received on the boot camp improved their referral technique.
One of the main anxieties about becoming a CT1, for 6 out of the 19 trainees, was the inability to perform practical surgical skills. Free-text comments made by trainees suggest that they found the simulated aspects of the sessions particularly useful.

Discussion:
The simulation training within the CST induction Bootcamp in Severn Deanery seems to address trainees’ self-perceived clinical needs and was universally found to be relevant to clinical practice. Future embedding of simulation within all specialty cross-cover sessions could improve this further. Skills acquired during simulation sessions were regularly used in day-to-day practice. The specialty specific skills chosen aligned well with the probability of them being used based on the frequency of exposure to specialty referrals. In conclusion, the simulation training during the Bootcamp was relevant to clinical practice, and most importantly developed surgical trainees’ skills. Simulation continues to be a “cutting edge” part of medical education.

References:

Ref: 286, Board: G5
Student engagement with an online Masters programme in Clinical Education
S Wordie, G Aitken
University of Edinburgh

Background:
There is a rise in the number of students participating in online Master’s programmes. For online programmes to be effective, students must fully engage to maximise the benefits associated with the distance-learning environment.1 To be as successful in engaging students as traditional teaching methods, there must be a collaborative approach to learning along with a consistent presence from the teaching faculty.2 As students learn fully through a virtual environment, their ability to engage and interact is limited.3 This study aimed to investigate the degree of student engagement with an online Master’s programme in Clinical Education and to assess whether the level of interaction between students and with the teaching faculty was considered adequate and influenced engagement with the course.

Methodology:
A qualitative study was performed. An electronic questionnaire was sent out to all students enrolled on the Master’s programme for the academic year 2016-2017. 13 responses were received. Follow-up, semi-structured interviews were carried out with 4 respondents from various healthcare backgrounds, to discuss ways to improve student engagement with the course and increase student interaction.

Results:
70% of respondents reported attending the majority of the optional online tutorials, all stating that attendance at tutorials should continue to be optional. Students engaged with discussion boards but all respondents would prefer a more structured format to improve their use. 100% of students reported that interaction with the faculty was satisfactory. 65% of students reported sufficient interaction with fellow students. The majority of students interviewed reported a positive experience interacting online with their peers, stating it to be a privilege to work with peers from varying academic backgrounds. No prejudice was reported and the fear of exclusivity was non-founded. The interaction between students and staff was positive. Being postgraduate students, the students felt professional relationships developed with a mutual respect and open dialogue between staff and the student. Students enjoyed the opportunities to interact with numerous faculty members, rather than being assigned a designated tutor. Allowing students the opportunity to contribute to the course development was suggested as an approach to increase engagement with the course. Improvements in technology for both teaching and assessing the students was suggested to further improve engagement with the course. Integrating blogs into the assessed curriculum was suggested as a novel way to strengthen student engagement with the course and faculty.

Discussion:
Students generally engage with the online Masters programme. Student interaction with peers was a positive experience. The ability for students from all sectors of the healthcare system and from around the world to participate on the Master’s course brought another dimension to student relationships, as the past experiences of every participant varies and students can learn from colleagues of varying academic and geographical backgrounds. The interaction between staff and students was highly regarded. In postgraduate education, the archetypal undergraduate tutor-tutee hierarchical relationship is non-existent, instead the staff-student relationship is a dynamic exchange of information, not the didactic dissemination of information often experienced at an undergraduate level.

References:
The value of self-directed taster weeks for Foundation Year 1 trainees
L Ewan, K Robertson
West of Scotland Deanery

Background:
The UK Foundation Programme supports the development of taster programmes. The primary aim being for Foundation trainees to gain insight into a wider range of specialties to inform career choices. Currently foundation trainees experience a maximum of 4 specialties before application to a higher training programme. Minimal data exists on the uptake, experience and value of these taster programmes. We report a model for FY1 trainees working in General Surgery to undertake Medical Education days for this purpose with positive feedback of this experience and other important benefits reported after reflection on their experiences.

Methodology:
Reflective feedback was received from 24 FY1 trainees with reference to 2 blocks of 3 Medical Education days (EDs) during their 4 month placement on General Surgery at Crosshouse District General Hospital (Ayrshire and Arran Health Board, West of Scotland). Trainees were asked to spend 3 of these days within General Surgery or Anaesthetics and the remaining 3 days in a specialty of their choice. Trainees organised these days themselves with help from their Educational Supervisor. A combination of numeric feedback and free-text commentary was provided using a structured feedback form. Nine focused questions were asked with numeric feedback to indicate satisfaction in each area (analogue scale 0-9). These questions surrounded the value of EDs, usefulness in informing career choice, organisation of EDs and if this experience helped them to feel more integrated into the surgical team. Free text feedback enabled individuals to provide specific comments about positive and negative experiences.

Results:
A total of 24 FY1 trainees from August 2015-August 2016 provided feedback on their EDs. 6 days were available in total and the average uptake of these was 4.75 days. 33% (8/24) of FY1s undertook all 6 available EDs. Strongly positive average numeric responses (>7 on 0-9 scale) were given on the analogue scale with regard to the usefulness of EDs, informing career choice, ease of organising EDs and helpfulness of senior colleagues in facilitating EDs. The lowest scoring average response (5.46 on 0-9 scale) referred to too few EDs being offered throughout the year. Free-text feedback on positive remarks included the opportunity to consider career paths, better integration within the surgical team and learning new skills away from usual ward duties. Areas given for improvement centred around the logistics of organising time away from ward duties.

Discussion:
The primary aim of Taster weeks as stated by the UK Foundation programme is to expose trainees to wider specialties in order to inform career choices. The model presented here meets this primary aim. Additional benefits were observed with trainees stating they felt more integrated within the senior surgical team after this experience, they gained new practical skills and enjoyed the continuity of care for their patients. Areas for improvement centred around the organisation of time away from their ward duties and ensuring adequate cover was available during their absence.

References:

Ref: 199, Board:G7
What's In A Name - Exploring The Name By Which Junior Doctors Address Their Consultants
A Graham, J Hanley, B Messer
Newcastle Upon Tyne Hospital NHS Foundation Trust

Background:
Surgeons are arrogant, medics are boring and psychiatrists are crazy. Stereotypes within medicine are engrained into hospital culture with some specialties having a reputation of being less friendly. Hierarchy within medicine is also well established and evidence has suggested that, when this results in less approachable senior doctors, this negatively impacts on patients and juniors’ ability to ‘speak up’ and raise safety issues. However, there is limited literature on whether the name by which junior doctors address their seniors varies between speciality and whether this affects their approachability.

Methodology:
An online survey was created using SurveyMonkey© and distributed amongst all junior doctors working in the Newcastle Upon Tyne NHS Foundation Trust. IBM® SPSS® Statistics (Version 24) was used for analysis of data. Chi-Squared test and student t-test were used to calculate statistical significance. Data on respondents’ seniority, gender and current subspecialty were collected. The latter were grouped in 5 major specialities; Anaesthetics/Emergency Medicine (AEM), Clinical Sciences, Medicine, Paediatrics and Surgery.

Results:
434 responses were received from a cohort of approximately 800 junior doctors, of which 410 were included. Respondents came from 53 different subspecialties and all years of training. 19% worked in AEM, 9% Clinical Sciences, 35% Medicine, 10% Paediatrics and 27% Surgery. On average 43% of consultants were addressed informally and 71% of junior doctors found these consultants more approachable. There were statically significant differences in percentage of consultants addressed informally between grade of junior doctor (Foundation Year 1 and Specialty Trainee 8, 14% vs 57% p=0.004) but no difference between genders. There was also a statistically significant difference between a number of specialities (for example, AEM and surgery, 78% vs 23 % p=0.000).

Discussion:
This study is the largest to look at the name that junior doctors use to address their consultants and the only study to cover all grades of junior doctor. It shows a wide variety between specialities, with the results conforming to some well-engrained stereotypes. The vast majority of junior doctors consider the consultants that they address informally to be more approachable; this remains consistent throughout all specialties. The main weakness of this study is the small sample size within subspecialties. Country of origin was not considered in respondents, whether a cultural divide exists is without the remit of these results. Further research is required to investigate the impact of this on patient safety, staff wellbeing and trainee satisfaction.

References:

Ref: 228, Board: G8
Why do core medical trainees use PACES courses?
EJ Moseley, P Fletcher
Gloucestershire Hospital NHS Foundation Trust

Background:
The MRCP (UK) Part 2 clinical examination (PACES) is a key requirement for the completion of core medical training. It aims “to test the clinical knowledge and skills of trainee doctors who hope to enter higher specialist training” (1). Anecdotal evidence and observation suggest that a high proportion of core medical trainees utilise privately funded PACES revision courses, often at significant personal expense and frequently without reimbursement from local study budgets. Little to no research has been carried out in this area to date. We used the term “MRCP PACES” to search EMBASE, Medline and PubMed and found only four related studies (2-4). No studies looked into the factors influencing course uptake or the impact on exam outcomes. This study evaluates the use of these revision courses, and the factors that drive their popularity. It also investigates candidates’ opinions on the courses themselves. By doing so, the project hopes to explore whether these courses close a gap in current training provision, or whether the format of the PACES exam itself drives the utilisation of these private courses.

Methodology:
This study is built on an initial series of interviews and focus groups using guided discussion, to build content validity for the subsequent survey that was distributed more widely. The interviews, transcribed and assessed using a thematic analysis approach, were used to identify areas for specific investigation when producing the online survey. The survey has been distributed across multiple training areas in the United Kingdom to assess a wide range of views. It collects both qualitative and quantitative data.

Results:
All trainees in the initial interviews had attended a PACES revision course, or were intending to do so. Initial interviews yielded a broad range of topics for further investigation by the survey, including the influence of one’s peer group (statements such as “everyone does it” for example), the perceived influence of course attendance on exam outcome (the belief that course attendance will lead to success), and the perceived psychological benefits of course attendance (the belief that course attendance will give added confidence when undertaking the exam). This will be presented in greater detail alongside the full survey results.

Discussion:
Initial results suggest that there is a high level of course usage in preparation for the MRCP PACES examination, with a wide range of factors identified for this. This project explores and discusses whether this is due purely to psychosocial aspects of medical trainees, whether gaps in current training are at the root of this phenomenon, or whether the PACES exam itself is so far removed from true clinical practice as to require coaching in order to succeed.

References:
Supply and demand: The use of simulation in a surgical induction bootcamp to meet trainees’ cross-cover needs
O Beaumont, B Rybinski, J Pascoe, T Walker
Severn School of Surgery

Background:
Doctors from a variety of backgrounds are expected to start working as core surgical trainees, potentially having never practiced in specialties they are expected to cross-cover. Concerns have been raised from trainees and consultants regarding their training and ability to provide this cover. Our model of a 3 day ‘core surgical bootcamp’ at the commencement of the two year core training programme aims to address potential gaps in training to improve patient safety as well as trainee satisfaction whilst on call. In line with GMC guidance it is a requirement for trainees to have the required knowledge and skills in all areas they cover, and where they do not, they must seek advice. Whilst providing emergency cross-cover, this often means calling a senior registrar or consultant, who they may not know, who may be asleep or off-site.

Methodology:
The ‘core surgical bootcamp’ has been developed over the past three years within the Severn School of Surgery. The course ran over 3 dates in August 2017, with a combination of short interactive lectures, low and high fidelity simulation. Sessions were delivered by specialist registrars and consultants, with trainees rotating through all surgical specialties that they might reasonably cross-cover on call. Attendance at the boot camp is mandatory for all 24 new Core Surgical Trainees. Trainees work at seven different trusts within Severn Deanery, with differing on-call needs. An online survey was sent to all trainees involved 5 months after the bootcamp in December 2017.

Results:
18/24 (75%) of trainees completed the survey in full. In the 5 month period after the bootcamp: Trainees were asked to take acute referrals on cross-cover for patients in General Surgery, Trauma and Orthopaedics, Vascular, Urology, ENT, Gynaecology and Neurosurgery, with trainees being asked to cover up to 5 specialties in any one rotation. Trainees also regularly made referrals to, or had discussions about acute patients with, all of these specialties.

General surgery was the area trainees were most likely to have worked in before (89%), with Maxillofacial (11%), Plastics (17%) and Neurosurgery (17%) the areas in which fewest trainees had experience. When asked about the most appropriate method of teaching, 50% value the combination of short lectures and practical/simulation approach used in the bootcamp, whilst the other 50% would have favoured a purely practical/simulation based approach. No trainees would have favoured a purely lecture based approach.

When asked whether the boot camp improved referral technique, and whether they felt more confident in knowing when to wake up their senior, none disagreed. 56% of trainees agreed that patient safety as part of hospital at night had improved as a direct consequence of the bootcamp.

Discussion:
The ‘core surgical bootcamp’ acts as a valuable introduction to new colleagues and working environments and provides specialist-led multi-format education for new surgical trainees. A specific focus of acquiring the increasingly varied knowledge and skills required for specialty cross-cover through a practical and simulation based approach has demonstrated very positive results. We have established that trainees across the Severn deanery can be expected to regularly cover a wide variety of specialties in which they do not normally work and have had no prior experience. A bootcamp teaching format including varied practical scenarios and simulation was widely preferable and resulted in trainees with more confidence in their referrals and when to speak to seniors. Trainees also clearly felt that the knowledge and skills they learnt at the bootcamp improves patient safety when they are providing cross-cover. We conclude therefore, that simulation training in a bootcamp style scenario is an extremely valuable tool for new surgical trainees and its implementation and development improves patient safety in line with the changing nature of our NHS.

References:
2. The General Medical Council. Good medical practice. GMC; 2006
‘What is a Doctor?’: An exploration of the changing perceptions of Undergraduate Medical Students at The University of Nottingham
R Noble
Nottingham University Hospitals & Royal Derby Hospitals

Background:
Since the Junior Doctor’s contract dispute in 2016, there has been increasing concern regarding recruitment and retention of medical students. Nationally, medical school places were available via clearing in 2017. At the University of Nottingham, medical students spend the last 30 months of their course on Clinical Placement. ‘Medicine’ attachments take place in Clinical Placement 1 (CP1) (7 weeks), Clinical Placement 3 (CP3) (8 weeks) and a final Medical Assistantship (MAST) prior to graduation. We sought to explore the perceptions of the role of a ‘Doctor’ amongst medical students across these placements and assessed whether these changed over time.

Methodology:
In 2017, over a 10 month period, students at the beginning and end of their ‘Medicine’ attachment at Queen’s Medical Centre were given a blank post-it note and asked ‘What is a doctor?’ Students were reassured that their responses were anonymous and were aware that their answers were being collected for the use of this project. Responses were collected and uploaded to a database and a qualitative analysis, looking for common themes and trends over time, was performed.

Results:
A total of 189 responses were collected. 96 from CP1, 76 from CP3, and 17 from MAST students. Overall the most popular words were ‘health’ (n=37), ‘professional’ (n=35) and ‘patients’ (n=35). Although less common, negative descriptors such as ‘underpaid’, ‘over-worked’ ‘pressure’ and ‘underappreciated’ also featured in responses (n=3 for each). Each time this was observed at the end of the ‘Medicine’ attachment, or in MAST. In addition, ‘care’ (n=10) ‘wellbeing’ (n=9) ‘cure’ (n=7) and ‘heal’ (n=7) were used to describe the role of a Doctor, a theme that was constant from the beginning of CP1 until the MAST placement.

Discussion:
The perception of what the role of ‘Doctor’ means is wide-ranging. Whilst more negative themes developed overtime, students still perceive the role as patient-centred and one of caring. Further work needs to be done to explore whether the proportion of these negative themes changes once trainees qualify. With increasingly common recruitment challenges, work needs to be done to further understand and improve the perception of life as a Junior Doctor whilst students are at Undergraduate level and to manage their expectations upon graduation.

Ref: 350, Board: H2
'He didn’t draw the curtains around': Exploring multiple stakeholders’ narratives of resistance during safety and dignity dilemmas
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Background:
Professionalism and the workplace learning culture are highlighted as key areas for research in postgraduate medical education [1,2]. While formal curricula teach good professional practice, trainees commonly encounter safety and dignity dilemmas (witnessing or participating in lapses) in the broader workplace learning culture [3]. The purpose of this study is to explore safety and dignity narratives of multiple stakeholders, and their actions within these difficult situations, to understand how they make sense of their experiences and actions.

Methodology:
A qualitative narrative interview method was used. Thirty-nine participants from four stakeholder groups were recruited from two UK regions (Site 1=25; Site 2=14): Patient representatives (n=10), medical trainers (n=8), medical trainees (n=10) and allied healthcare professionals/nurses (n=11). Interviewers asked what happened, who was involved, what did you do and why, thereby grounding participants’ views within lived experiences. Data were analysed thematically, first by individual researchers reading transcripts alone, then coming together to develop the thematic framework for coding [4].

Results:
Two hundred and twelve narratives (stories of experience) across the four stakeholder groups were coded to five themes. In this presentation, we focus on the themes of (1) safety and dignity dilemmas; and (2) resistance during dilemmas. The most common types of dilemmas were breaches of safety through lack of knowledge/competence (n=33); of staff physical safety through attacks or threats by patients, families or carers (n=17); staff compromising physical aspects of patient, family or carer dignity (n=21), and verbal humiliation between staff (n=27). We identified 148 expressions of resistance. Most common were: direct (n=30) or indirect (n=27) raising concerns afterwards, direct (n=27) or indirect (n=16) verbal challenges, direct (n=16) or indirect (n=23) bodily challenges, and withdrawing. A range of reasons and intent were provided by participants in their narratives regarding why they resisted and what they hoped to achieve.

Discussion:
Participants easily narrated safety and dignity dilemmas in the workplace, recounting various acts of resistance to such dilemmas. While these findings show some similarity to those identified at the undergraduate student level, to our knowledge, our study is the first of its kind to report such findings within postgraduate learning and from multiple stakeholder, offering a window onto the prevailing safety and dignity cultures of the NHS. We recommend that narratives such as these are used to develop educational interventions for postgraduate healthcare professionals to improve safety and dignity cultures.

References:
Medical students’ perceptions and experiences of human factors in medicine: A part of the “hidden curriculum”?
C Copplestone, L Szymanski, C Copplestone, H Coakley, A McDermott, C Miller, A Samuels, P Davies
Gloucestershire Academy, University of Bristol

Background:
Human factors can be defined as: “an understanding of the effects of teamwork, tasks, equipment, workspace, culture and organisation on human behaviour and abilities, and application of that knowledge in clinical settings”. (1). Human factors are vital for the safe delivery of healthcare. More than 70% of adverse incidents in healthcare can be attributed to human factors (2). The teaching of human factors is well established at a postgraduate level. Specialties such as anaesthetics, surgery, and emergency medicine have used experience from other complex, high risk industries such as aviation to design and deliver programmes of teaching (3,4,5,6). The Undergraduate curriculum remains relatively lacking in explicit focus on human factors (8). Students may well learn about this area by other, more informal routes, for example in their clinical placements. Such learning is described as the “hidden curriculum” (9). It is latent and implicit, and is mediated by informal interactions in environments that are not specifically or solely identified as educational. This hidden curriculum inculcates students with skills attitudes and knowledge that are vital for clinical practice, but does so independently of the formal curriculum.

This study aims to characterise medical students’ knowledge of human factors in medicine, using focus groups. Thematic analysis of the interviews will aim to ascertain whether this knowledge is cultivated explicitly, via formal teaching offered by the University, or tacitly, via a hidden curriculum. The study will also aim to identify any explicit attempt to teach human factors in the undergraduate curriculum. During the second part of the study focus group data will be used to design a session on human factors and to create a questionnaire, which may be used to evaluate the students’ experiences in this field.

Methodology:
1. Curriculum mapping exercise of University of Bristol undergraduate medical curriculum, to determine any explicit mention of human factors/non-technical skills training.
2. Focus groups conducted with undergraduate medical students in their third and fifth years of study to explore participants’ perceptions and experiences of Human Factors in Medicine. The questioning route will be derived from literature and from brainstorm sessions with the research group.
3. A questionnaire will be derived from the content of focus groups. This will be given to medical students, to determine their perceptions and attitudes towards the teaching of human factors.
4. A session on Human Factors will be derived from the content of the focus groups and questionnaire and delivered to medical students. This will be evaluated using white space questions and 5-point Likert-scale questions.

Results:
Thematic analysis and descriptive statistics of questionnaire results will be available for presentation at the Annual Scientific Meeting.

Discussion:
The results of this study will inform the effective delivery of teaching on human factors, which will potentially have a large impact on patient safety.

References:
2. Institute of Medicine Committee on Quality of Health Care in A. To Err is Human: Building a Safer Health System. Washington (DC): 2000 National Academies Press (US)
**Professionalism of Mental Healthcare**

L. Aylott, PA Tiffin, M Saad, AR Llewellyn, GM Finn
Hull York Medical School

**Background:**
Efforts have been made to define professionalism within medicine, yet little attention has been paid to the concept in mental health services, where service user needs differ to that of the general patient population. The review set out to derive a definition of professionalism for mental health services using the existing literature.

**Methodology:**
A rapid systematic review was conducted to identify records that described professionalism in a mental health service context from 2006 to 2017. Thematic analysis and a narrative synthesis are reported.

**Results:**
Seventy records were included. Professionalism was described on two levels; as a dynamic social contract between professions and society, and; at an individual level with domains of intrapersonal, interpersonal, and working professionalism. Utilising emerging themes, an operationalised definition of professionalism, suitable for a mental health service context was derived.

**Discussion:**
Within a mental health service context, emphasis is placed on the interpersonal aspects of practice such as communication skills, maintaining boundaries and humanity. Themes relating to the vulnerability of patients and the challenge of supporting autonomy and choice whilst maintaining safety and acting in a client’s best interest are evident. Resolving such tensions necessitate ‘practical wisdom’ and demand a flexible approach to working in challenging situations.

**References:**
Abstract taken from a paper that has recently been submitted to the Journal of Mental Health

*Ref: 189, Board: H6*
Role of a doctor

G Martin
Health Education England, North East

Background:
Various attempts to define the role of a doctor have been made [1, 2]. Ongoing technological advances, scientific discoveries, sociopolitical influences and changes in patient demographics, prompt a look at the historic role, skills and attributes of doctors [3, 4]. Such definitions recognise the complexity and evolutionary nature of the concept, the many stakeholders concerned and the changeable nature of both the health sector and the teams delivering care [4, 5]. This is likely to become more complex with the arrival of medical associate professionals [6]. Improving access to healthcare, reducing waiting times and increasing the workforce available are priorities for the NHS [7, 8, 9]. It is suggested that, via this approach, the health service can reduce the cost of delivering care [7] and dramatic changes have been proposed [5, 6, 9]. In particular increasing the skill mix of various health professionals. Skills historically belonging to a doctor are increasingly performed by other members of the team. This can be threatening, with perception of role erosion and a sense of being ‘squeezed out’. Dialogue suggest that the current unrest amongst doctors is in no small part related to a mismatch between role expectation and the actual reality of practising within the NHS [8]. There is a suggestion that little has been done to preserve the value of the role of a doctor [8]. Should we continue to invest in a workforce, who often take longer to train, are more expensive and when it has proven so easy to democratise many aspects of what they do? What is it that doctors bring to healthcare today that only they can offer? Current definitions are consensus statements or theoretical opinion. The time is right to engage the people working alongside doctors, to establish a grounded definition of their role.

Methodology:
The project is a qualitative study, based on a mixed methodology. To seek the views of members of the MDT a semi structured interview has been created. Data collection will be in the form of face to face or telephone interviews with the members of the MDT, from a minimum of three distinct teams. Questions are iterative and have been designed to promote discussion around a variety of themes. These include; subjective professional role; competency; other members professional role; role of the doctor(s). Data will be recorded and transcribed. Thematic analysis will be used to understand and present data generated, with inter-rater checking and respondent validation. Participants will be invited to comment on themes. The opinion of managers will also be sought, to offer contrast and comment on managerial expectations of doctors role. A focus group with junior doctors will be organised to discuss the thematic findings of this project and invite comment.

Results:
The project has two primary aims. To develop a working description and consensus opinion of the exact role of a doctor through discussion with a variety of multi-disciplinary team members. This will consider doctors across specialty and grade. The second aim is to understand what exactly a doctor brings to a multi-professional team and what is it that only the doctor can do within this team. In identifying both, it is hoped that the explicit expectation, and the role of a doctor, can be consolidated.

Discussion:
The project will return a consensus opinion, regarding the role of a doctor within a multidisciplinary team. This has consequences when thinking about the organisation of healthcare in the future and where doctors may be found within this. It is hoped that this work can inform any future projects looking at the moral and training of junior doctors. Changes to the traditional roles of doctors, the lack of apparent value given to ‘new’ roles alongside future developments within the NHS imply urgent change is needed; particularly to medical education and training, the expected competency and professionalism of doctors and roles involving medical leadership [8, 10].

References:
The Devil in the Detail. Establishing medical student indemnity in modern multi-professional community learning environments in the UK
C Conway, T Thompson
University of Bristol

Background:
When working in hospital environments, medical students benefit from the same Crown Indemnity enjoyed by qualified health professionals. Currently, Crown Indemnity does not extend to the community and there is a lack of clarity over who would be responsible for the payment of claims resulting from medical student negligence in these settings. For instance some colleagues assume that medical student membership of a Medical Defence Organisation (MDO) would confer cover. It does not. Rather, liability would revert to the MDO of the doctor responsible for the supervision of the negligent student. However, in modern multi-professional community learning environments students are often learning from (if not directly supervised by) health workers other than doctors. This then raises the issue of whether or not our students are adequately covered pending the introduction (announced recently by the Secretary of State for Health) of universal state-backed indemnity (1) In this study we set out to define the range of allied healthcare professionals involved in student teaching/supervision and clarify the indemnity policies of the main UK MDOs.

Methodology:
A questionnaire was sent to all 106 GP practices, within the footprint of Bristol Medical School, who are involved in the supervision of our year 4 medical students. They were asked to identify allied health professionals (AHPs) who had supervised medical students during the month long clinical placement at their practice. Having studied their official policies, we wrote to the three main MDOs (MDU, MDDUS, MPS) and received email responses from all three. We sought written advice from the Medical Schools Council and presented our concerns to the Society of Academic Primary Care's Head of Teaching Group.

Results:
51 of 106 practices replied (48% response rate). In total 12 different AHPs were used in the supervision of our medical students. Synthesising data from official documentation, email responses and the anecdotal experience of GP academics, we identified definite areas of ambiguity in relation to MDO medical student indemnity. In particular it is currently unclear what is meant by “supervision” by AHPs, and therefore how indemnity would be conferred in the unlikely event of a negligence claim against a student under AHP supervision.

Discussion:
A wide range of AHP are involved in the supervision of medical students at Bristol Medical School. This is a good thing and should be encouraged. The risk of a negligence claim occurring against a medical student who is being supervised is likely to be very small. However, if a claim were to arise against a student who was under the supervision of an AHP it is currently unclear who would be liable. The approach from the medical indemnity organisations to this scenario was varied. Since the indemnification of community medicine is in general under review we feel that this is a good time to clarify the nature and extent of this vital cover.

References:
1. Rimmer, A. A new indemnity scheme for GPs. BMJ, 2017. 359p

Ref: 170, Board: H8
Using ‘learning cafés’ to address challenging areas of a medical school curriculum
K Howorth, P Paes
Northumbria Healthcare NHS Foundation Trust

Background:
Many studies have demonstrated that new medical school graduates feel unprepared for starting work as a doctor (1). They also struggle with difficult conversations such as discussing death and dying with patients and their families (2,3). Social constructivism describes how learning occurs through social interaction and dialogue, discussing ideas and problem solving (4). ‘World cafés’ were designed to create an informal, relaxed atmosphere where members of the public could recognise and share their personal values and enhance their understanding of the world around them through conversation (5). We adapted these to create ‘learning cafés’ to try to address these challenging areas of learning through providing a space for medical students to discuss these topics and learn through the reflective dialogue.

Methodology:
Two ‘learning cafés’ were run with 38-39 final year medical students from Newcastle University in November and December 2017. Students sat in groups of 4-7 people around a table with refreshments and a set of cards with stimulus questions about a topic. The main adaptation from the ‘world café’ model was to keep the groups of students together, rather than seek an “output” through students moving groups to share learning. One café was about the transition from student to doctor including questions about practicalities of starting work as a doctor, and hopes and fears for Foundation Programme. The second cafe had questions relating to death and end of life care. There was informal discussion at each table with students sharing their experiences and views related to the questions posed. The cafés lasted approximately 90 minutes and teachers participated in the table discussions rather than taking an active teaching role.

Evaluation looked at two elements of the learning cafés:
1. Before and after each café, students were asked to grade their response to statements assessing their confidence, awareness and understanding related to the topic using Likert scales of 1-5 to determine if this had changed through the café.
2. After the café, students were given free text questions to enable an understanding of the potential benefits of the cafés, elements of learning and any suggested improvements.

Results:
Both cafés were greatly enjoyed by the students with many benefits and learning points described.
‘Transition to F1’ café:
- 37 evaluations were completed.
- There were marked changes in students’ confidence in key aspects of transition. For example, 35% increased their agreement with the statement ‘I feel as well prepared as my peers to be a doctor’ and 30% of students felt more ready to start F1 after the café.
- Benefits described related to the content and type of conversations that took place; the cafés provided the opportunity to discuss concerns and share perspectives with colleagues in an informal atmosphere. Students described having learnt lots about their colleagues and found it reassuring that they all had similar worries about starting work.

‘Death café’:
- 36 evaluations were completed.
- Many students’ awareness and confidence increased in a number of domains; 13 out of 36 students were more confident discussing death and dying with patients and their families after the café, and felt more able to discuss issues about this with their colleagues.
- Many benefits were described such as the open discussion around a challenging or ‘taboo’ topic, hearing a range of views, and the relaxed atmosphere.

Discussion:
Learning cafés provided an informal, relaxed atmosphere for final year medical students to discuss sensitive and challenging topics with successful results regarding their confidence and learning. Similar outcomes were found when we trialled learning cafés with healthcare professionals in the Trust for professional development. Learning cafés have a role in addressing challenging topics or areas of hidden curriculum so we now intend to expand this to further areas of the curriculum and medical students at other stages in the Trust.
References:
1. Miles S, Kellett J, Leinster SJ. Medical graduates’ preparedness to practice: a comparison of undergraduate medical school training. BMC Medical Education. 2017; 17(33).

Ref: 069, Board: H9
Who do you think you are? PA student perceptions of professional identity formation

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Newcastle University

Background:
The advent of ‘hybrid’ roles that blur the traditional distinctions between healthcare professionals signals a shift towards a more integrative delivery of healthcare in this country. The Physician Associate (PA) is an example of such a role and is set to have a significant impact on healthcare provision in the coming years. However, very little is currently understood about the views and perspectives of these incumbent PAs. Given the multifaceted nature of the job, it appears timely to clarify issues of professional identity; that is ‘the perception of oneself as a professional’ (1 Pg1221). Certainly, recent literature has advocated the importance of healthcare professionals forming a professional identity and warned of the dissonance, stress and attrition of not developing one.

Aim: To develop an understanding of professional identity formation in first year Physician Associate students in order to help develop student support.

Methodology:
The overarching theoretical stance of this study was interpretivism and the methodological approach was based on hermeneutic phenomenology. Qualitative data was collected through semi-structured interviews with four first year PA students at Newcastle University. Transcripts of these interviews were analysed through thematic analysis.

Results:
Four themes and ten sub-themes emerged from the data. These encompassed participants’ perceptions of their emerging professional identity and the influences acting upon its formation. The four themes included:

Practical role confusion: the students felt unclear about the practical aspects of the PA role; this included their clinical remit on the ward and the boundaries associated with this. Additionally, there was a concern expressed that other healthcare professionals and wider society were unsure about the clinical remit of the PA; meaning their introduction might be met with hostility.

Novel/emergent role: students identified their role as “ambassadors” in broadcasting the value and purpose of the new role of the PA. However, this lack of firm establishment in the healthcare environment also seemed to restrict their professional identity formation as the lack of qualified PAs translated to a lack of suitable role models for students.

Values: a clear aspect of the students’ developing identity was association with the practice of the medical model. Further, prominent throughout the interviews was the perception that the professional PA would independently design and implement patient management, indicating a perceived role that goes beyond that of a technician to align more with an agent of positive change.

Formal ‘learning’: the experiences of interacting with patients and observing how they could “contribute to a patient’s care” enabled the students to substantiate the value mentioned above; the agent of positive change. Secondly, during placements, students exercised the diagnostic knowledge they were accruing, contributing to the development of this aspect of their emerging identity.

Discussion:
The PA students appeared to demonstrate an emerging, yet delicate, professional identity comprised of different aspects. Some components of this identity were clear to students, such as making a difference to patients’ lives, answering an urgent service need and aligning with the medical model. However, other aspects were less developed, such as the practical remit of the role and its standing in the working clinical environment. There appeared to be multiple influences impacting on the students’ professional identity formation. Some impacters were supportive, such as the value of clinical placements, whilst others seemed more inhibitory, such as the perceived lack of clarity about the PA and a paucity of role models. A possible implication of this study may lie in greater awareness about the nature and remit of the PA role from students, other healthcare professionals and wider society.

References:

Ref: 091, Board: H10
Psychometrics

Can Myers-Briggs type indicator predict specialty preference in UK Undergraduate Medical Students?
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Background:
The Myers-Briggs Type Indicator (MBTI) was published with the aim of assisting individuals in understanding themselves and others better after World War Two (1).

The MBTI is a scaling measure of 4 dichotomies of personality type. These are:
• How you perceive your outer and/or inner world. This is categorised as either extroversion (E) or introversion (I).
• How you perceive information. This is either referred to as sensing (S) or intuition (N).
• How you interpret and make decisions. This is classed as Thinking (T) or feeling (F).
• How you process with information from the outside world. This is known as judging (J) or perceiving (P).

Your personality is therefore determined by combining the 4 scales as per what you are more drawn to, for example INTJ or ESTP etc. There are therefore 16 distinct MBTI personality types (2).

Since being published, the questionnaire has been used across many professional spheres (2,3). Previous studies have investigated the correlation between personality types and medical specialty inclination (4-7) and this study, therefore, aims to determine whether undergraduate medical students' MBTI types are more or less prevalent in specific medical specialties.

Methodology:
This is a cross-sectional psychometric study of undergraduate medical students currently enrolled at the University of Bristol. Participants will be recruited both by verbal and email invitation distributed by the administration staff at the University of Bristol. They will take an online version of the MBTI and submit their MBTI type, complete with their preferred choice of medical speciality, via an online survey. Results will be collected until 30th June 2018. Data will be analysed with the aid of the University of Bristol statistics department. If uptake is sufficient, a Cramer's V test and/or Fisher's exact test will be attempted. If this is not possible, data will be represented proportionally.

Results:
Final results are awaited as recruitment is currently ongoing.

Discussion:

The current literature on this subject matter shows no clear consensus on which medical specialities are aspirations for UK undergraduate medical students.

As such, for students that are unsure of which field they wish to specialise in, having a range of choices that match their personality type could give a sense of direction. At present, research of MBTI type and medical specialty preference is more inclined towards American universities with results indicating that feeling (F) personality types are closely associated with Primary Care and Family Medicine professions. Results also suggest that extroverted (E) and thinking (T) types are more likely to choose a surgical profession. Interestingly, what studies also seem to reveal is that even though an individual’s specialty preference may change in the process of their training, personality type tends to stay relatively stable over time. (4)

An understanding of this may benefit medical students in choosing their future career paths. Future considerations include whether the personality of consultants in their specialities matches those of medical students aspiring to that profession.

References:

Ref: 251, Board: J1
Exploring Motivational Factors Involved in Pursuing a Career in Medicine
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University of Buckingham

Background:
The existing literature regarding reasons for pursuing a career in medicine predominantly focuses on the distinction between two types of motivation: intrinsic and extrinsic. The most common intrinsic motivational factors often include complex problem-solving and the prospect of engaging in the challenging nature of medicine for enjoyment, whilst extrinsic motivators consist of the prestige associated with a respected career as well as the concomitant high salary. A small pilot study suggested that this was a narrow view, and that further research might be helpful in identifying a wider range of motivational drivers leading people to embark upon medical training. Therefore, this study aims to identify key factors that motivate medical professionals and whether these motivators relate to aspects of one’s cognitive style.

Methodology:
This research comprises an online-based questionnaire survey, collecting data on participants’ motivation for choosing a career in medicine. Participants (n = 97) were drawn from a variety of settings: 11.3% from qualified practitioners; 29.9% from students at the University of Buckingham Medical School; and 58.8% from other UK medical school students. All participants were either qualified doctors or were training to become doctors. In order to assess motivation, items from studies by Smith, Lambert and Goldacre 3, Watson and colleagues 4, and Todisco, Hayes and Farnill 5 were combined with pilot data to create a more comprehensive set of 30 potentially motivational items. These were scored on a scale ranging from 1 (not a motivating factor) to 5 (a highly motivating factor). As an area of secondary interest, the survey explored areas of medical professionals’ cognitive styles and training in relation to their motivational drives. To this end, the questionnaire also included the following four scales, all of which have been widely tested and validated: Need for Cognition (the reworded version) 6, Need for Closure (the short version) 7, the Runco Ideational Behavior Scale (RIBS) 8, and the Kaufman Domains of Creativity Scale (K-DOCS) 9.

Results:
A factor analysis has been conducted on career motivation replies, from which six distinct factors were identified: (a) status and financial prospect; (b) intellectual and scientific nature; (c) using skills to benefit others; (d) convenience and compatibility with family life; (e) influence of others; and (f) social interaction and communication. A more traditional extrinsic/intrinsic breakdown using the expanded list of motivators will also be included. Selected comparisons to other data collected (e.g. Need for Cognition 6) will also be presented.

Discussion:
This research updates and extends the limited literature in this area, helping to show the variety of different motivational factors involved in making career choices for qualified and student doctors. There are various implications of this work, primarily the development of an instrument which can be used to: (1) track the changing profile and trends in a person’s motivation to pursue a medical career; (2) track primary motivational drives against drop-out rates at medical schools; (3) identify selection issues that might be associated with different motivational patterns; (4) identify whether particular motivators are linked with burnout experiences; and (5) map aspirations to eventual career pathways in medicine, which could be particularly beneficial when providing career guidance to aspiring doctors.

References:
Exploring Medical Student experiences of denigration of General Practice by clinical teachers
E Carlin, H Alberti
Newcastle University

Background:
Recent reports from focus groups and evaluation surveys of trainees, undertaken by our team, have highlighted denigration of GP as a career as a problem. It is reported that this starts as an undergraduate student. Our aim was to explore comments about GP as a career made by clinical teachers. The study is being conducted to further our understanding of the current difficulties in recruitment to GP training, so that they might be addressed.

Methodology:
This was a qualitative, explorative study. Data was collected by conducting two focus groups of Medical Students who were undertaking an SSC in GP at Newcastle Medical School. A semi structured interview format was utilised. They were digitally recorded and professionally transcribed. Results were analysed using thematic analysis.

Results:
The study confirmed that students hear comments from clinical teachers which denigrate General Practice as a career. The nature of these comments are consistent with those reported in other work to date. Themes identified consisted of: the individual, the curriculum and culture in the Medical profession. These were used to postulate a model which may explain why negative comments shape a students’ perception of GP.

Discussion:
Denigration of GP is an ongoing problem with the Medical profession and strategies to address it must be developed or recruitment to the speciality will continue to decline. This study suggests a model which can help to understand the complex relationship between different factors which result in negative comments being taken on board by a student.

References:

Ref: 077, Board: J4
How best to select for resilience: is this compatible with a values-based selection process?
HH Nadama, G Pinner
University of Nottingham

Background:
Background: It is well established in the medical education literature that medical students are subject to a multitude of stressors, which can have severe, long-lasting consequences on their mental health and clinical practice (1). Resilience has been identified as a core competency (2), which can buffer against stress and allow individuals to recover from adversity. Therefore, assessing resilience and integrating it into a complex, values-based selection process is of great interest.
Aims: The aim of this study was to investigate how resilience is currently assessed in the University of Nottingham’s multiple mini-interviews (MMIs) and to further establish if a candidate’s resilience has any impact on the success of an application. Secondarily, to assess whether a candidate’s self-rated resilience changes on starting the course.

Methodology:
Applicants who were invited to the MMIs completed the Brief Resilience Scale (BRS) (3), a validated psychometric scale. Successful applicants repeated the scale during their first year. Applicants’ BRS scores were analysed and compared against their MMI station scores, whether they were more likely to get an offer, and their follow-up BRS score.

Results:
631 BRS questionnaires were eligible for analysis. The mean resilience of applicants was 3.92, indicative of average resilience. BRS scores showed a weak, but significant, correlation with the MMI stations intended to test resilience ($r=0.11$, $p=0.008$) and knowledge/application of Good Medical Practice concepts ($r=0.08$, $p=0.03$).
Additionally, there was no significant difference in the BRS scores of applicants who received offers and those who were rejected ($t=-1.30$, $p=0.19$). There was, however, a significant decrease in students’ BRS scores from the time of their interview and when they began the course ($t=5.231$, $p=0.00$).

Discussion:
Although the station task in the MMI designed to test candidates’ resilience did not show a high concurrent validity with an established method, it measured resilience to an extent. This indicates there may be scope to develop this station to better measure resilience. Moreover, the decrease in perceived resilience between interview and life as a medical student suggests that resilience is variable, and raises questions about why this apparent reduction in resilience might occur. However, the study also suggests that resilience is contextual and time-sensitive and, therefore, might be able to be cultivated.

References:
Multiple mini-interviews do not disadvantage medical school applicants from widening participation programmes: one medical school’s experience

J Burton, D Bee, E Fino, M Marshall, D Murdoch-Eaton
University of Sheffield Medical School

Background:
There is concern that the socio-economic backgrounds of UK medical students do not reflect the population that they will serve on graduation. The Sheffield Outreach Access to Medicine Scheme (SOAMS, a local widening participation (WP) scheme) and Realising Opportunities (RO, a national scheme) aim to counter the effects of socio-economic and educational disadvantage and assist participants into the profession. Our MBChB admissions selection process comprises a step-wise consideration of academic attainment, UKCAT attainment and performance in an eight-station Multiple Mini-Interview (MMI). Few studies have explored the relationship between MMI performance and WP/low socio-economic status and it is thought that low socio-economic status does not significantly impact on MMI performance. We aimed to determine whether our MMI and selection process disadvantages applicants from WP schemes.

Methodology:
Applicants invited to MMI in the 2016-17 admissions selection cycle were classified into four categories, according to their fees and WP status: Non-WP Home/EU (H/E), Home SOAMS, Home RO and Overseas (OS). Applicants attended an eight station MMI. Each station lasted eight minutes and had a single interviewer. Interviewers were from either a clinical or a medical education background, were blinded to the fees and WP status of the applicants, and scored applicants using a non-anchored global rating scale. A one-way ANOVA and Tukey HSD post-hoc test were used to investigate differences between the four groups of applicants, at the 0.05 significance level.

Results:
Of 1720 applications received in 2016-17 there were 23 from SOAMS and 13 from RO participants. A total of 760 H/E, 21 SOAMS, 7 RO and 98 OS applicants were interviewed. Overall, our selection process favours applicants from these WP schemes: 62.5% of SOAMS and 46.2% of RO applicants received an offer compared to 33.6% of H/E applicants. The difference was even greater when looking at proportion of applicants who eventually entered the programme (SOAMS 60.9%, RO 15.4%, and H/E 12.6%). In our MMI, WP applicants performed similarly to W/E applicants at all stations. OS applicants performed less well than H/E applicants in 4 of the 8 stations and overall. SOAMS applicants out-performed OS applicants in two stations. There was no significant difference in performance amongst groups in stations exploring Good Medical Practice, the candidate as a person, ethics or information processing/logical reasoning.

Discussion:
We give applicants from specific WP schemes differential consideration at each stage of the admissions cycle. WP applicants meeting an adjusted (lower) academic threshold and the same UKCAT threshold as other applicants progress to MMI without UKCAT ranking. They receive offers, without ranking, if they have a satisfactory performance at every MMI station. Our MMI neither advantages nor disadvantages applicants from WP schemes but our overall approach to selection means that such applicants are more likely to receive an offer of a place than non-WP applicants.

References:
Piloting a new and innovative way of interviewing candidates for Medical School places
R Lethem, S Atkinson
University of Bristol

Background:
The interview process for medical school applications in the UK has traditionally been formed of interview panels and, more recently, Multiple Mini Interviews (MMIs). Whilst these methods have advantages (1), there are inevitably some limitations in their style and format, particularly with regards to their environment, time limitations, and often unilateral assessment of interviewees (2). Such interview techniques may also disadvantage applicants from less represented backgrounds (3, 4).

This study aims to pilot a new and innovative method of interviewing medical school candidates. An apprenticeship scheme was developed to allow candidates wishing to apply to medical school to participate in a two-week work placement, where they would take part in a number of activities and teaching sessions that closely resemble life as a medical student. An assessment of a participant’s performance over the two-week period would help determine whether they would be offered a place at medical school. It is hoped this method of interviewing can allow applicants to better demonstrate their suitability for medical school compared to current methods.

Methodology:
The scheme was hosted by the University of Bristol, and took place at Weston General Hospital over two weeks in July 2017. Six candidates were identified from a pool of interviewees that had performed well at the University of Bristol’s MMI interview cycle in the corresponding year, yet had just missed out on an offer; priority was given to those from a widening participation background. The scheme comprised of clinical work experience and teaching sessions led by a number of different health professionals within the hospital environment. In addition, participants were provided with accommodation and a small amount of spending money, and were encouraged to buy groceries and other necessities over the two weeks as if they were medical students.

Performance in the scheme was measured by multisource feedback provided by colleagues across a range of allied health services with whom the participants had spent a reasonable amount of time during the scheme, in addition to a final informal interview meeting with two members of staff at the University of Bristol. Finally, participants were invited to take part in a voluntary follow-up focus group during which they could provide feedback on the scheme.

Results:
Following completion of the scheme, all six participants were made offers by the University of Bristol to study Medicine. Participants generally performed more strongly on the same or similar assessment criteria in the multisource feedback during the scheme than when assessed during their MMI interview. The scheme was extremely well-received by participants; the main theme of feedback was that the scheme provided a better opportunity to demonstrate suitability to study Medicine at university, compared to the MMI format. Results comparing participants’ performance during the scheme compared to the MMI, and from the focus group feedback session, will be presented.

Discussion:
The apprenticeship scheme is a new and innovative method of interviewing candidates for medical school, and was well-received by participants. Participants of the scheme generally performed better when assessed on the same or similar assessment criteria under the scheme compared to the MMI format. By allowing candidates more time and opportunities to demonstrate their credentials, the apprenticeship method of interviewing can provide a more appropriate platform to assess a candidate’s suitability for medical school. Furthermore, assessing candidates’ performance in the workplace and from multiple sources may provide a fairer and more accurate assessment of a candidate’s credentials.

References:
Selecting for the future: A retrospective study of trainees’ personality type and pre-university achievements
P Wilson, H Randles, H Alberti, S Lord, J Aktkinson
Newcastle University

Background:
This project arose as a result of the workforce planning discussions at Health Education North East, specifically the need for more GPs, with focus on medical school selection, in the context of the recent admissions document “Selecting for excellence1”. There is concern that medical schools are not recruiting cohorts that are representative of the general population, possibly contributing to not enough doctors choosing general practice as a career. The aims of the project were to appreciate any differences of personality types, and academic and non-academic achievements between GP trainees and hospital trainees.

Methodology:
We used a mixed methods approach. We recruited 45 GP trainees, 26 Core Medical Trainees and 17 obstetric and gynaecology trainees, asking each participant to complete a Myers Briggs (MB) questionnaire and a free text questionnaire. The MB data was analysed using chi squared tests. The free text information was analysed using content analysis.

Results:
When comparing the three trainee groups individual MBTI types, no statistical differences were found. However, when hospital trainees were compared to GP trainees, significantly more hospital trainees were “Thinking” in contrast to “Feeling” in GP trainees. The other MBTI types were strikingly similar.
The trainees from both hospital and GP programmes reported similar academic and non-academic achievements. The only major difference was that a greater number of GP trainees reported a musical achievement.

Discussion:
There is some evidence that GP trainees demonstrated attributes of the ‘feeling’ over ‘thinking’ personality domain within this group of trainees. To evaluate precision and extent of this claim, larger numbers may be needed. Both GP and hospital trainees enter medical school with broadly similar achievements. Our small pilot study has suggested some small differences in personality types and reported achievements, but no strong indicative differences between GP and hospital trainees.

References:
So you want to be a doctor: Where do schoolchildren get information from to aid their medical career decision making?

G McGrory
NHS Lanarkshire

Background:
NHS Lanarkshire serves a socioeconomically deprived population and has several programmes to encourage local schoolchildren to apply to medicine. Local schools have a low progression rate to university. The links between social identity and progression to university are complex (1), with a variety of positive and negative influences affecting the decision to attend medical school. There has been work published in the literature looking at career decision making in medical students and junior doctors, but little regarding prospective medical school applicants, particularly those from lower socioeconomic backgrounds (2). This study aims to establish what prospective medical school applicants’ from lower socioeconomic backgrounds career ambitions are, why they want to be a particular type of doctor, and what factors influenced those decisions, with particular consideration to the influence of medical television programmes.

Methodology:
55 prospective medical school applicants (age 16-17) who attended school in North/South Lanarkshire took part in the study. A questionnaire asked the following questions: (1) Do you know what kind of doctor you would like to be?; (2) Why do you want to be this kind of doctor?; (3) Which of the following has influenced your decision (medical family members, family, friends, TV, social media, career advisers, teachers, their own doctor, personal experience of healthcare, news articles, other)?; (4) Do you watch any medical television programmes? If so, which ones?; & (5) Do you think they have influenced what type of doctor you would like to be?.

Results:
77% of participants were female. 25% wanted to be paediatricians, 16% unsure, 7% cardiologists, 7% emergency medicine, and 5% each for orthopaedics, surgery and GP. Many were not sure why they wanted to be a particular type of doctor, with some basing it on experiences from work experience or through personal/family interactions with healthcare providers. 47 % rated family and personal experience of healthcare as one of their biggest influences on their career choice, with 38% citing TV, 34% teachers and 24% careers advisers. 67% watch medical television programmes (mean 2.2, range 1-4), with the most commonly watched including Grey’s Anatomy (51%), 24 Hours in A&E (40%), & Casualty (30%). In total 19 different medical television programmes were mentioned. Despite earlier indicating that TV influenced their career choices, 85% felt that it had not influenced what type of doctor they would like to be. The reason cited included a perceived unrealistic glamourisation of working life as a doctor, a lack of reflection of the true working conditions (stress/long hours), a lack of paperwork (!), and the cases often portrayed as having a ‘miraculous’ recovery inconsistent with real life.

Discussion:
Prospective medical students from Lanarkshire display a strong preference for paediatrics, hospital and emergency specialties as their preferred career choice. They base this on information from their family, their own personal experiences of healthcare but also from what they see on television. Interestingly, teachers and career advisers were less of a source of influence than television on career-decision making for this cohort of schoolchildren. This is unsurprising given the low progression rates to university from the schools that these children attend, accompanied by low teacher expectations regarding educational attainment and therefore lack of careers advice provision or inspiration (3). This demonstrates that more work needs to be done to encourage positive career interactions with teachers regarding medical careers. More work needs to be done to encourage schoolchildren from low socioeconomic backgrounds to consider a wider range of medical careers. By broadening their horizons, we might encourage potential future applicants’ who may otherwise have not considered a medical career.

References:

Ref: 041, Board: J9
The role of medical students as mentors in the effective delivery of a widening access to medicine programme.

J Whiting, S Wickham, D Beaney, J Price.
Brighton & Sussex Medical School

Background:
Traditionally, medicine has been an elitist discipline, accessible only to the privileged few. Currently, the workforce of doctors is more diverse, however there is still stark over-representation of the highest socio-economic classes (SEC) in medical student cohorts. The 2014 'Selecting for Excellence' report stated 80% of all UK medical students come from a pool containing just 20% of all UK schools. This is not representative of the patients treated by doctors, as lower SECs disproportionately access healthcare. The background and SEC of a person do not signify their suitability to be a doctor and thus it is suggested that application and selection for medical school places should not be based on the SEC or cultural background of the applicant. Attention must be paid to identify, inspire, and enable the wealth of untapped potential outside the pool of traditional applicants i.e. to level the playing field.

Widening Access to Medicine (WAM) supports non-traditional applicants throughout the application process to study medicine. Many WAM programmes, such as BrightMed at BSMS, use mentors to engage participants and deliver teaching, however, there is currently a significant lack of research as to what makes a good WAM mentor and what qualities they require to best enable the participants to make strong and successful applications to medical schools.

My research question was: What role can medical students, as mentors, play in the effective delivery of a widening access to medicine programme?
Sub questions were:
• What qualities does a good widening access to medicine mentor need?
• Is a good mentor for school students in year 9 different from a good mentor for year 12?
• What training should mentors receive to facilitate their development as good mentors?

This research helps fill a gap in the literature about WAM scheme mentors. It provides context, direction and advice on training of BrightMed mentors and WAM mentors across the country.

Methodology:
The research was performed via on-to-one interviews and an interpretative phenomenology analysis (IPA) approach followed. The goal of IPA is to investigate how participants make sense of an event or experience and how they, personally, attach meaning to it.
Via purposive sampling, a small selection (3-4) of year 9 participants at the beginning of their BrightMed journey, and 3-4 year 12 participants at the end of their BrightMed journey were selected, in addition to 3-4 year 9 BrightMed mentors and 3-4 year 12 BrightMed mentors. The participants selected were of any gender or ethnicity. Individual semi-structured interviews of 30-45 mins length were then conducted, transcribed and analysed qualitatively with the support of my supervisors.

Results:
Results from thematic analysis of the interviews will be presented.

Discussion:
This research has identified the characteristics of mentors needed by WAM applicants from their own perspectives, as well as from the perspectives of medical students who ‘mentored the mentors’. This will inform future WAM schemes run at BSMS, including the development of a BrightMed mentor training programme. It may well provide a basis for future research and improvement of similar WAM mentors across the country.

References:

Ref: 410, Board: J10
Widening access through simulation: Using ABCDE assessment of a simulated trauma patient to augment work experience
G McGrory, Z Hutcheson
NHS Lanarkshire

Background:
In NHS Lanarkshire work experience provision consists of a three-day in-hospital work experience programme to local schoolchildren. Activities on offer vary, but ranges from clinic attendance to observing in theatre. These roles are passive, and in order to decide whether a medical career is the correct decision for an individual, hands on experience is essential. However, due to concerns for both pupils and patients, hands on experience such as assessing acutely unwell patients is not appropriate during work experience. In order to provide further opportunities to experience medical careers first hand, a widening access simulation initiative has been developed. This descriptive project describes how we have overcome the challenges of providing hands on experience of managing unwell patients using a novel adaptation of simulation to widen access to medicine.

Methodology:
This widening access session for schoolchildren provides them with an opportunity to experience hands on management of a simulated patient. The scenario is directly co-facilitated using two experienced facilitators who drive the management of the patient, who has multiple injuries following a road traffic accident. The schoolchildren are introduced to the concept of ABCDE assessment of unwell patients, and take it in turns to assess and treat the patient who has suffered a pneumothorax, head injury resulting in coma, a ruptured spleen, suspected spinal injury and superficial injuries.

Results:
The simulation is undertaken using high-fidelity simulation equipment. The simulation suite is set up as A&E Resus to provide an authentic experience. This provides the schoolchildren with exposure to the A&E environment in a safe way, both for them and for patients, and allows them to actually get hands on with a 'patient', augmenting their work experience and assisting with career decision making. Evaluation of the session by 55 participants rates the session at 4.5/5 on a Likert scale. Many commented that that taking part in simulation had given them a greater insight into the breadth of medical careers available and insight into the role of junior doctors.

Discussion:
Simulation is not widely used in work experience provision. Whilst not a replacement for traditional placements, simulation offers exciting opportunities for augmenting prospective medical school applicants' experience and provides an innovative way of inspiring schoolchildren to consider a medical career. Introducing schoolchildren to a 'real life' experience of assessing an acutely unwell patient provides an authentic addition to traditional passive observation of medical careers during work experience and provides invaluable material for making career decisions.
An interprofessional model to implement Massive Blood Loss Guidelines
T Johnston, A Foster, P Solanki
Princess Alexandra Hospital

Background:
There is national evidence that points to poor early recognition, ineffective intervention of managing Massive Blood Loss (MBL) (1). We found that local audit revealed the same causing delays in treatment and inappropriate use of blood products and that this related to gaps in knowledge as well as a lack of robust MBL guidelines.

Methodology:
Based on the positive findings of running an interactive, interprofessional session during a local audit meeting, we decided to run monthly teaching using simulation, face-to-face lecture and interactive stations. The session starts with a pre course quiz followed by a simulated event based on an SI of a warfarinised person who suffered an MBL. The scenario involves 3 volunteers to manage the situation after a briefing from faculty while the rest of the group watch events unfold via a live video link. After a scenario debrief, a taught session involving answers to the pre course quiz takes place followed by a coffee break. The group then splits into 3 groups who rotate between interactive stations: 1) Making up Prothrombin Complex Concentrate for infusion 2) use of patient warming equipment 3) “guess the blood loss”, a visual inspection of various sized swabs, maternity pads and procedure sheet. The groups then return to the main lecture room, get the answers for “guess the blood loss” before finishing with lunch. We call this “MDT4MBL” and is a 3 hour session open to all members of our clinical teams. We started these events in 2014. This supported the introduction of MBL guidelines at the same time. The days are facilitated by the Transfusion Practitioner, Simulation Lead and makes use of company reps who supply the Trust with equipment to manage MBL/transfusion and medications designed to reverse anticoagulants. These reps also co-sponsor the day in terms of catering.

Results:
Since implementing these days, 213 staff have attended. We have seen evidence of decreased blood product usage (Blood product cost for MBL use: 2013= £47, 409 v 2017=£15,439). We have seen a significant increase in the number of MBL activation calls (2013: 30 v 2017: 102 ) but a decrease in the number of actual MBL events (2013: 20 v 2017: 11). We have noted a reduction in morbidity of those treated for MBL. For example, general bed usage for those given a diagnosis of MBL has fallen (2013-231 days v 2017-164 days). We have also seen a reduction in mortality in terms of survival to hospital discharge (2013: 65% v 2017: 82%). Until 2017, we noticed a reduction of Intensive Care Unit (ICU) admissions for those with a diagnosis of MBL (2013, 85% patients admitted to ICU; 2016 39% patients admitted to ICU). ICU length of stay (LoS) for those admitted with MBL had reduced (2013 mean LoS:3.6 days v 2016 mean LoS: 1.6 days). However, preliminary data suggests that while 72% (8/11) of those with MBL were admitted to the ICU in 2017, we are yet to extrapolate LoS data.

Discussion:
While new technologies are now available to reduce or stop bleeding, we assert that the increasing number of MBL activations indicates a closing knowledge gap among our clinicians. While the reduction of morbidity and mortality may be in part to emerging technologies, we believe that incorporating these into the sessions has some part to play in equipping our clinicians with the knowledge to investigate their use within the clinical setting where previously they may have not. Therefore we argue that early management of MBL has been achieved through these sessions and that this is reflected in part to reduced morbidity & mortality. We believe that a year-on-year rise of the number of activation of MBL calls through the MBL alert systems in place is a good outcome measure of this education and the interactive nature, short time and relevance of these sessions are a good fit for adult learning styles (2,3). Thus we continue to provide these sessions on a monthly basis and are now using them to support the introduction of updated guidelines specific to each specialty.

References:
Buku Haematology- An App to address clinical haematology queries
A Langridge, S O’Brien
Newcastle-Upon-Tyne NHS Foundation Trust

Background:
Clinical haematology and the interpretation of haematological tests are subjects that can often seem intimidating and result in frequent calls to the on-call haematology service. The benefit of many haematological investigations however is that results can often be broadly categorized as positive or negative, high or low, and therefore managed in a protocol-driven way, supported by clinical information about the context in which those tests were taken. An ongoing audit of the calls to the haematology on-call service in the Newcastle-Upon-Tyne Hospitals trust has identified that although the majority of questions asked to the on-call required clinical expertise and experience to answer, some could have been answered with a concise resource addressing the most common of these questions. Furthermore, from our surveys conducted so far, over one third of junior doctors are now using Apps everyday, therefore we felt that an App would provide a suitable framework for this information. This tallies with previous research which identified as far back as 2012 that 87% of medical students surveyed were using their phone for a clinical purpose daily [1] and with advancement in availability of clinical Apps this will have only increased further.

Methodology:
In light of this we have developed an App called ‘Buku Haematology’ which aims to answer many of the questions posed to the on-call haematology team, whilst educating and empowering junior doctors, consultants and GPs to build confidence in further decision making with regards to haematological problems. The App covers core haematology topics such as general haematology, transfusion and coagulation. It also describes ‘workups’ for a new presentation of common haematological diseases such as suspected myeloma, lymphoma and leukaemia for example. We have collated this information from our clinical experience, research, national guidelines and textbooks. The clinical responsibility for the patient remains with the clinician treating them, but we hope that with the information given, initial decision-making and investigation planning for the patient can be started, allowing for the first steps to have been taken before a haematology referral is sent to improve efficiency in the busy clinical workplace. The App is free so that as many as possible can have access to it.

Results:
We have undertaken initial surveys of junior doctors as to their use of Apps at work to ensure that an App was a reasonable platform for this information, and since over one third of those doctors surveyed were using Apps every day, we felt that this was a good medium for this information to be put forward. To assess the utility of the App, we plan to survey users through the App for subjective improvement in their understanding of haematological problems and need to contact haematology services. Alongside this we will also perform a survey of the number of calls to the haematology service January 2018 and then in January 2019 to see if there is a reduction in calls to the haematology service after further publication of the app within the trust over the coming months. We can also monitor uptake through the hosting service for the App. We acknowledge that our project is still a work in progress but that data collection in time will both be interesting and guide us to improve the App by adding further content as requested such as a recently added Obstetric haematology section.

Discussion:
We hope that this app will benefit patients, those who consult on-call haematology services and haematologists. It may also be that other specialities may identify that this framework for on-call queries could be also applied to their specialties, allowing for safe, concise and efficient information delivery in an increasingly busy clinical workplace. We would also hope to take this App abroad to Malawi where we currently have a haematology link, as the information remains very general and transferrable to developing world haematology.

References:

Ref: 273, Board: K2
Can we successfully teach novice junior doctors basic interventional ultrasound in a single focused training session?
G McKay
Leeds Teaching Hospitals NHS Trust

Key messages
- Interventional ultrasound for vascular access is associated with high success rates and improved patient experience.
- Basic interventional ultrasound is an achievable educational outcome for the majority of junior doctors and does not require prerequisite knowledge or experience.
- By teaching junior doctors basic interventional ultrasound, we can equip clinicians with a relevant and versatile skill set, upon which they can achieve their core competencies and develop further clinical expertise.

Background
Ultrasonography is recognised as an invaluable imaging modality for assessing critically unwell patients and obtaining vascular access. Senior Emergency Medicine and Anaesthetic clinicians will regularly use ultrasound guided imaging to establish vascular access for unwell patients however junior doctors, who are routinely the first clinicians to review deteriorating patients, are not encouraged or required to develop basic ultrasound interventional skills and are therefore ill-equipped to utilise ultrasonography.

Aim
To demonstrate that teaching basic interventional ultrasound skills to novice junior doctors in a single focused session is an achievable outcome.

Method
We reviewed the success of the ‘Junior doctor Ultrasound Training’ (JUST) course in teaching basic interventional ultrasound skills to junior clinicians. We collated information from 237 JUST delegates. We surveyed candidates’ prior ultrasound experience and retrospectively analysed their level-2 Kirkpatrick formative assessment outcome following the JUST course.

Results
The overwhelming majority of doctors had no prior ultrasound experience (>95%). 99% (235) of candidates performed ultrasound to an acceptable standard to pass the formative assessment. 73% (174) achieved the course outcomes independent of faculty prompting. 1% (2) candidates failed the formative assessment.

Conclusion
Basic ultrasound competency is an achievable educational outcome for the overwhelming majority of novice junior doctors. Our findings add to growing evidence that early ultrasound tuition can be both valuable and economical for training clinicians. By arming junior doctors with a relevant and versatile skill set, we can provide opportunity for clinicians to develop their expertise and prepare for the future challenges of clinical medicine.
Changes in medical student attitudes towards public health following an innovative model of integrated inter-professional teaching
S Chepkin, D Karunaratne, K Hollis, B Kumaravel
University of Buckingham Medical School

Background:
Doctors are part of the wider public health system. Reflecting this, public health knowledge and skills feature prominently in the UK General Medical Council’s Outcomes for Graduates. However, internationally many medical students have been found to not appreciate the relevance of public health. At a new UK medical school, the principles of public health are taught in dedicated units during the first two years. Student feedback and focus groups following these units suggest whilst students grasp public health principles, they are uncertain of the relevance to clinical practice. Public health teaching is therefore being embedded into the clinical rotations, forming a longitudinal theme throughout the course. In the third year, this was achieved via integrated small group seminars, incorporating lectures, integrated clinical case studies and role play. These seminars were developed and delivered jointly by clinical and public health consultants and registrars. Feedback collected at the end of the seminars was very positive, with students describing the sessions as enjoyable, interesting and useful. However, the objective of this qualitative study was to explore whether this integrated, inter-professional teaching had an impact on student’s attitudes towards public health, in particular its relevance to their daily clinical practice.

Methodology:
All third year medical students on clinical placements in primary or acute care were invited to participate in one of three focus groups to share their experiences and perceptions of public health, evidence based medicine, health promotion, and the integration of public health and clinical teaching in their clinical placements. The topic guide was developed jointly by public health faculty and third year medical students. Two students moderated the focus groups, observed by a member of public health faculty. The focus groups were audio-taped and transcribed verbatim. Transcripts were then analysed using recursive abstraction.

Results:
Twenty-nine students participated in focus groups, approximately 60% of those invited, with between seven and twelve students in each focus group. There was consistency between the focus groups, with the same key themes appearing in each. Students spoke confidently about the clinical relevance and importance of public health, evidence based medicine and health promotion. Several factors emerged which had influenced their views, including the use of integrated case studies, role-modelling by clinicians, clinician-directed educational tasks and joint teaching by clinicians and public health. However, students expressed difficulty in applying the public health knowledge and skills learnt in previous years to their clinical practice, especially unprompted. Key barriers described included a lack of confidence and competing course priorities. Activities involving guided practice, including role plays, integrated case studies and educational prescriptions, were valued for building confidence and skill. To encourage regular practice, students recommended prompts in each clinical placement, in the form of public health learning outcomes, mandatory exercises or work based assessments (WBAs) such as case based discussions (CBDs), being careful not to create excessive student workload.

Discussion:
Integrated, inter-professional public health teaching, alongside increased clinical exposure, was successful in changing student attitudes about the clinical relevance of public health. Specific, transferable, factors contributing to this phenomenon were identified. Despite understanding the principles of public health and appreciating the clinical relevance, students felt they struggled to apply their public health knowledge to clinical practice. Guided practice and regular prompts in each clinical placement emerged as potential methods to influence student behaviour and promote application of public health skills in clinical practice.

References:

Ref: 237, Board: K4
How well do new junior doctors interpret and document ECGs? An audit investigating the documentation surrounding ECGs before and after the introduction of an ‘ECG interpretation course’.
V Baktash, S Kukadia
Hinchingbrooke Hospital

Background:
ECGs are a necessity in hospitals around the world and are vital in diagnosis and management planning. They must be interpreted and analysed correctly. Oftentimes, clinicians with limited experience are asked to give an opinion on ECGs, which are not documented clearly, leading to both missed diagnoses and mistakes in medical management. The reasons for this lack of documentation are not fully understood.

Methodology:
An original audit tool will assess how well the findings of ECGs are being documented. Fields that will be audited include: patient location, time of ECG, patient information, symptoms, diagnosis, and clinician details. The medical notes of all inpatients on a randomly selected day will be collected, and all filed ECGs from the present admission will be analysed. The results of this, coupled with the results of an ‘ECG quiz’ will be discussed with junior doctors to identify key areas for improvement and to share personal stories of success and failure. These will then be used to create a tailored and structured teaching course highlighting core ECG training, senior doctors’ methodology, and guidelines and safety netting. Following completion of the teaching course, a post-course quiz will be carried out, and inpatient ECGs will once again be analysed, with the results being compared with pre-course values. All results will be analysed using the chi-squared test. Statistical significance will be deemed at p0.05.

Results:
Our pre-intervention audit showed large inadequacies in the documentation of ECGs. Out of 214 analysed ECGs, only 11.7% had contact details of a clinician on either the ECG or in the patient’s notes. Only one field had a 100% record – the date and time being recorded on each ECG.
The feedback sessions identified that junior doctors:
1. Are not confident in their ability to interpret ECG findings, leading to a lack of documentation;
2. Are not clear as to how an ECG should be correctly documented, and the guidelines surrounding this area;
3. Felt that senior review is not always readily available;
4. Felt that documenting a ‘best guess’ interpretation or documenting uncertainty was not an option.
Following completion of the teaching sessions, an improvement was seen in 5/6 areas audited, with 198 ECGs being analysed post-intervention. The most dramatic rises were seen in clinician details (pre-vs post-intervention; 11.7% vs 83.8%, p0.001) and in patient symptoms (22.4% vs 88.4%, p0.01). Documentation of ECG findings rose from 58.4% to 75.8% (p0.01) with a trend for improvement in quiz results (68% vs 79%, p=0.078).

Discussion:
Current ECG training for junior doctors does not allow them to feel confident when interpreting and documenting ECGs on hospital wards, even when they can correctly identify pathology. Our tailored training programme led to an improvement in the documentation of ECGs. We created a ‘safe space’ where doctors could share past successes and failures, to help build a culture of openness for those who are struggling. The teaching course also highlighted the minimum documentation expected, and that even when unsure, doctors should document their thoughts appropriately to increase transparency among healthcare professionals. By including these teaching sessions in doctors’ inductions, we hope to reduce errors in management, and improve patient safety.

Ref: 300, Board:K5
Introductory Laparoscopic Skills for Pre-Surgical Trainees
S Williams, T Howe, T Waring, B Clarke, K Hunjan, M Ng, T Lasoye
Kings College Hospital

Background:
Opportunities for development of surgical skills in Medical Undergraduates, Foundation Year Doctors and Junior Clinical fellows are limited. The focus on academic attainment and service provision is common for the majority of candidates prior to appointment to specialty. Basic surgical skills courses are available, but can be costly (up to £1000), prescribed to an agenda and not tailor-made to individual needs (1). 70% of consultant surgeons felt that basic knowledge of the equipment was the most important attribute in an undergraduate to be allowed to assist in theatre (2).

Methodology:
There was scope for developing a course within our trust. There was a defined need established through garnering opinion from undergraduate and postgraduate teaching sessions. Our centre has a dedicated surgical simulation suite which was not being effectively utilised. The suite contains a variety of laparoscopic trainers and equipment commonly used in the operating theatre.
Through pre- and post-course questionnaires future sessions are developed and modified to enhance the individual’s experience. Thus far it has been running for three months. Demand for courses has increased; as such it is being delivered on a fortnightly basis.
Up to 6 candidates take part and additional surgical faculty are sourced from the gynaecological and surgical departments. It is offered free to all medical staff and undergraduates across our trust.
A typical session consists of:
- Basic surgical skills, suturing & knot tying (1.5 hours)
- Laparoscopic skills – 5 practical skills exercises to enhance dexterity & proficiency (1.5 hours)
- Short lectures delivered on concepts of laparoscopy, suture types and general principles

Results:
80% of candidates rated their pre-course experience in basic surgical skills as either ‘minimal’ or ‘no’ experience. Two-thirds reported ‘slightly or ‘not at all’ confident. Two-thirds ‘rarely’ had the opportunity to practice basic surgical skills.
In the post-course evaluation 80% of candidates are ‘quite’ confident and 20% ‘moderately’ confident. No candidates rated themselves as ‘not at all’ or ‘slightly’ confident demonstrating a 100% improvement in confidence.
All candidates found the session useful and at the appropriate level to suit their needs.
Comments were wholly positive. These included the following:
- “It was the perfect level of teaching for me.”
- “Very good individual feedback. Opportunity to practice with plenty of time”
- “...lots of 1 to 1 feedback... Really fun!”

Discussion:
Through the feedback thus far, there is a clear need for continuation of the course. Word of mouth has generated interest from additional hospitals in the south east of the UK. The course is now being offered to potential candidates from within these areas. Questionnaire data will be collected to enhance and develop our existing service further. The model is transferrable to other centres with minimal upstart costs. Our vision is to offer a relevant and tailor-made skills session at a more affordable individual cost (£35). Furthermore we plan to develop and branch the course to include intermediate level trainees.

References:
2. Shakir T, Lee T, Lim J, Jones K. Should medical students be given laparoscopic trainin
The Core Anatomy Syllabus for Undergraduate Nurses– A Delphi Study to Create a Foundation for Clinical Practice

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Background:
Bioscience is an umbrella term used by nurse educators to describe anatomy, physiology, biochemistry, pathology, pathophysiology, genetics, microbiology, pharmacology and biophysics as an amalgamate (1). Primary studies have identified a “bioscience problem” throughout the United Kingdom, (2,3,4) New Zealand and Australia (5,6) regarding a deficit in student nurses and registered nurse’s knowledge, understanding and application of the biosciences (7).

There is no clarity on which specific bioscience subjects are problematic for students. The requirement for standardised subject specific core syllabi has never been more pertinent given the need for advanced assessment and evolving clinical roles for nurses as members of multidisciplinary team. All Health professionals, including nurses, must be able to relate form to function: a grounding in anatomy is an essential foundation on which to underpin other knowledge relevant to clinical practice (8) as well as other basic and clinical sciences studied as part of the undergraduate Nursing Degree programme (9). A standardised syllabus enables institutions to map their curricula to a standard which is comparable nationally and can be triangulated to international standards (10).

Despite anatomy being a fundamental requirement in nursing practice, there is widespread geographic variability throughout the UK due to generic guidance as the NMC does not specify outcomes for anatomy but alludes to it within its competency statements in life sciences (1). The present study therefore aimed to confirm the anatomical knowledge a nursing graduate should have to be deemed eligible and safe to register to practice by using a modified Delphi approach.

Methodology:
The Delphi approach was employed to seek consensus on which learning outcomes should be included in such a syllabus. The Delphi method was modified as the research utilised an existing framework (of published learning outcomes rather than a blank canvas; The framework consisted of two iterations of the Anatomical Society’s core syllabus for regional anatomy in undergraduate medicine (11,12).

A Delphi panel was constructed involving ‘experts’ (individuals with experience of teaching anatomy to undergraduate nursing students). Members of Council of the Anatomical Society nominated the panel members. The resultant panel consisted of 57 experts. The research team performed an initial screen of outcomes within the framework to remove outcomes that were not applicable – these typically related to imaging and diagnostics. The Delphi panel completed the process online using the Survey Monkey platform. The experts were asked in two stages to ‘accept’ or ‘reject’ each learning outcome – stage one encouraged open comment and modifications to outcomes. A final formatting was performed by the research team to standardise presentation, making changes either to correct any anatomical or minor syntax errors. The approach was based on previous work by the Anatomical Society (13).

Results:
In the Stage 1 185 outcomes were presented to the Delphi panel. 65 outcomes remained after stage 1. Following stage 2 and formatting, 64 learning outcomes remained forming the final syllabus. The learning outcomes on the new core syllabus achieved over 80% acceptance by the panel. Each stage allowed participants to comment on the outcomes (13).

Discussion:
We present the first core anatomy syllabus for undergraduate nurses 64 learning outcomes. It is a conceptual building block from which the anatomy for nurses can be developed, as well as a physical document for use and development by stakeholders in nursing- from students to accrediting bodies (13.)
References:

Ref: 208, Board: K7
What to stop and what to start: improving undergraduate medical student’s ability to manage patients at the end of life
L Mulligan
NHS Lanarkshire

Background:
It is estimated that in the first year of qualification a foundation doctor will care for an average of 40 patients who will die, and another 120 patients in the final months of life. A survey of foundation doctors in Scotland in 2013 showed that 67% of foundation year 1 doctors felt “not very well prepared”, at the point of graduation, to manage end of life issues. This study found that “practical teaching sessions on prescribing are seen as increasingly important preparation for clinical practice and should include palliative care cases”. The General Medical Council produce outcomes for graduates, which details standards for new junior doctors. Included in these standards is the ability to “contribute to the care of patients and their families at the end of life, including management of symptoms, practical issues of law and certification, and effective communication and team working.” The Association for Palliative Medicine have also produced an updated curriculum for undergraduate medical education in 2014, which outlines learning outcomes that medical students should demonstrate by the time of graduation and qualification as doctors.

Methodology:
The aim of my project is to investigate knowledge in undergraduate medical students, of recognition and management of a patient at the end of life, in line with the Association for Palliative Medicine curriculum for undergraduate medical education.
I have conducted a literature review to assess the evidence for improving palliative medicine into the medical undergraduate curriculum, and have subsequently designed a teaching workshop for undergraduate medical students, addressing a number of learning objectives from the Association of Palliative Medicine’s curriculum. This is a small group session, promoting peer support and allowing students to deal with difficult situations in a safe environment. There is a combination of prescribing exercises and case discussions.
An initial questionnaire will be completed by the students to investigate student perceptions of palliative care, and confidence in managing patients at the end of life, confirming death and death certification. This will be compared with answers from FY1 doctors in the same hospital. I will use both qualitative and quantitative data collection in my questionnaire. There will also be a post-workshop questionnaire, to assess if the intervention was successful in improving their knowledge.

Results:
This project is still in the implementation phase, results will be available for presentation at the conference if successful.

Discussion:
This session will be initially offered to final year undergraduate medical students from University of Glasgow on preparation for practice placement at Wishaw General Hospital and subsequently rolled out over the other 2 local hospital sites if found to be beneficial.

References:

Ref: 256, Board: K8
Do commendation forms improve University of Bristol medical student perception of positive feedback received?
C James , H Fuller, J Ellis, J Leaman, S Kenyon, C Weegenaar
North Bristol Academy, University of Bristol

Background:
Medical students consistently report a desire for more individualised feedback (1) and feedback has been shown to be an important influence upon achievement (2-4). We incentivise students to work for exams with the lure of academic success. Given that we are training students to be doctors, not just to be successful at passing exams, how do we incentivise them to nurture and display the qualities we desire of a “good doctor”?
We propose introducing a scheme whereby students can be commended for behavioural excellence and non-academic achievement. Any professional interacting with the students can send a statement of commendation to a centralised location. Students would subsequently receive a certificate and feedback documenting the reason for this acclaim. Additionally, a list of students whom had received a commendation would be publicly posted at the end of each term.

Methodology:
Prior to introducing this scheme, we plan to survey student’s perspective on the feedback they currently receive, their thoughts on receiving more formal positive feedback and beliefs as to whether the knowledge of being publicly recognised for non-academic achievement would result in behavioural change. We will survey the students using questionnaires and focussed questioning. The pilot scheme will run for 18 weeks; at the end of this we will gather feedback from students and professionals involved in the scheme. We look to assess the impact of the scheme, mainly looking at whether students feel this scheme has influenced their attitude and behaviour while on placement.

Results:
Results from the initial questionnaire and focused questioning will be presented, as will the outcome of the scheme itself.

Discussion:
We anticipate that the students will appreciate receiving feedback on their performance in non-academic domains and that there is a subjective improvement in behaviour and attitude as a consequence. If this pilot proves successful, we aim to extend the scheme across other year groups and possibly to introduce objective measures to assess behavioural change. We hope that morale and motivation are boosted by this scheme.

References:
Evaluating the 'purple pen' prescribing scheme for fifth years at Keele University Medical School: A mixed methods study
N McCarville, R Kinston
Keele University Medical School

Background:
The GMC's 'outcomes for graduates' determines graduates should be competent in writing a safe, legal prescription from day 1 after graduation. Despite junior doctors being responsible for up to half of the prescriptions written in hospital, it is well documented that new graduates perceive themselves to be least prepared in prescribing. Due to numerous factors, prescribing errors are common and can have fatal consequences for patients. The EQUIP study of 2009, found that Foundation Year 1 doctors (FY1s) make errors in 8.4% of all prescriptions and Dornan et al insisted that medical education should promote students' education in the context of the clinical area within prescribing.

Both the EQUIP study of 2009 and the Protect study of 2014 identified a host of factors which contribute to prescribing error. These include individual factors, factors about the environment, factors relating to the team, availability of systems and resources, and the task itself. Despite this, undergraduate medical curriculums consistently focus on the task and not the context in which prescribing is done (and the consequences for this on task error).

Prior to the introduction of the prescribing skills assessment (PSA) in 2013, there was no formal assessment of student prescribing. The aim of the PSA was to “provide a mechanism to enable medical students to demonstrate they have achieved the basic competencies in prescribing outlined by the GMC”, although it is not yet clear whether this has been achieved. Again, the PSA does not take into account the unfamiliar environment in which graduates will be prescribing (e.g. busy wards).

Throughout the UK, there is no uniform approach to allowing students the opportunity of transferring skills learnt in the classroom to the clinical environment in terms of prescribing.

The literature does describe, however, a “pre-prescribing” scheme which was implemented and evaluated at Edinburgh medical school. This involved the use of stickers to identifying student prescriptions, and the use of a bookmark aide memoir to check prescriptions. This scheme was trialled on 12 students. Focus group feedback proved positive, and students felt that not only did it contribute to prescribing ability, but also professional development as a whole. Smith et al urged that development as a professional could almost solely be achieved in the context of the workplace.

Methodology:
Three years ago, Keele Medical School introduced a transcribing scheme for final year medical students, commonly called ‘the purple pen scheme’, due to students identifying their prescriptions in purple ink. This allows students to transcribe prescriptions on hospital drug charts, with a qualified doctor countersigning it. The scheme was implemented following the development of a standards operating procedure (SOP), which both students and staff agree to by taking part in the scheme. This includes certain pre-requisites, for example the student must be involved in the care of the patient. In this study, we are carrying out a mixed methods enquiry to evaluate students' prescribing patterns, student error rate in prescribing, and students' views on the impact of the scheme, including perceived preparedness for foundation years. We will do this by carrying out an end-of-placement questionnaire detailing frequency of prescribing and prescribing activities undertaken, an audit of student prescriptions on the wards which will critique them against the SOP and detail error rate, and focus groups exploring student views of the scheme and how it contributes to self-perception.

Results:
Data collection will be undertaken between January and April 2018.

Discussion:
We will expect to be able to draw conclusions about student prescribing patterns, student error rate, as well as how a prescribing scheme contributes to student self-perception, including preparedness for foundation years and prescribing ability.
References:
Smith S, Tallentire V, Cameron S. Pre-prescribing: a safe way to learn at work? The clinical teacher (2012) 9:45-49

Ref: 042, Board: L3
Exploring the physical environment of mental health inpatient wards: a medical student perspective

H Hargreaves
Northumberland, Tyne and Wear NHS Foundation Trust

Background:
There are some major physical differences between the mental health (MH) inpatient ward and general medical inpatient wards. For example: on entering the MH ward there is often a double air-locked entry system and there is no open nurse station or clearly visible patient bed board; patient bedrooms are mostly private with en-suite facilities and housed in a separate corridor - any patients seen outside of their bedroom are within communal areas and expected to be appropriately clothed; there is also no medical equipment unsupervised within communal areas and patients being assessed are unlikely to be seen in their beds or in communal areas, instead being taken into separate clinical or meeting rooms contained within the ward.

This physical environment of the MH inpatient ward is particularly unfamiliar for medical students attending their introductory clinical rotations and both medical students and faculty often identify difficulties in student learning, engagement and attitude during this rotation.

Cognitive load theory proposes that the total amount of mental effort being used in the working memory has implications for how much and what kind of information learners can process. Heavier cognitive loading is associated with error, interference in tasks and an increase in stereotyping, which can be associated with the aforementioned difficulties encountered within introductory MH clinical rotations.

Extraneous cognitive load refers to instructional procedures and is increased when the learner engages in cognitive processes superfluous to learning objectives, and thus should be minimised to facilitate engagement in learning.

The physical learning environment is a determinant of such instructional procedures and therefore the physical environment of an inpatient ward can potentially be viewed as an extraneous cognitive load. This suggests that students learning new information, such as medical students attending introductory clinical rotations, may experience heavier cognitive loading in their MH rotation due to the unfamiliarity of the physical environment.

Methodology:
Preliminary literature review suggests that this phenomena has not been adequately addressed within the field of healthcare education encouraging exploratory research for this study - seeking to describe and understand the transactional relationship between the medical student and the physical environment of the MH inpatient ward, and to consider its impact on the learning experience of the student. Acknowledging the subjective nature of knowledge, it holds an interpretivist stance and wishes to explore the experience of medical students through a phenomenological methodology.

Medical students attending their local MH clinical rotations are to be invited to partake in semi-structured interviews. Interviews will be guided by the research questions:
What is the medical student experience of the physical environment on MH inpatient wards?
To what extent do medical students consider this to be an extraneous cognitive load?
To what extent do they consider this to be beneficial to their experience?

Results:
Data collection is awaiting the student rotations and is anticipated to commence in February 2018 following ethical approval. Current intentions are to complete an 8(+2) approach which will see a minimum of 8 students interviewed, and to seek to interview a further 2 until data saturation is achieved. Analysis of the data will be via six-step thematic analysis. Results will be available at the time of this presentation.

Discussion:
It is hoped that the results of this study will offer insights into the physical environment of the MH inpatient ward and its potential to be an extraneous cognitive load or beneficial learning experience as perceived by medical students. Ultimately seeking to identify factors which may minimise barriers and/or enhance other beneficial factors which may better facilitate the learning of medical students whilst on clinical rotations.

References:
Junior Doctor Medical Specialty Departmental Induction: The Hurdles to Success and an Attempt at Change
S Brown, S Latif, G Gray
Norfolk and Norwich University Hospital

Background:
Problem: This is a quality improvement project aimed at improving the induction to the Oncology and Haematology department for junior doctors rotating within these specialties at the Norfolk and Norwich University Hospital. Background: Effective inductions can benefit the department as well as the receiver. It can encourage team bonding, reduce anxiety and allow the build up of trust within the team to aid maximal development of junior doctors ensuring safe care for patients and helping the department to excel. It is important that despite change over of doctor’s high quality patient care must be maintained. Therefore a good quality departmental induction is vital. There are currently few studies that look specifically at departmental inductions rather than trust inductions, however what is present does act as a guide to start thinking about what may need to be included, many of which however look at surgical trainees rather than medical.

Methodology:
Three cohorts were asked for feedback on their departmental induction. Each cohort was of four months duration during a period of August 2016-August 2017. Qualitative and quantitative data was collected in the form of a questionnaire. Cohort 1 had undergone the original induction and Cohort 2 and 3 had undergone a redesigned induction based on feedback obtained from Cohort 1. Our key outcomes were junior doctor satisfaction with induction and level of preparedness for on-call duties.

Results:
The initial cohort completed a questionnaire and numerically ranked their satisfaction with their induction on a scale of 0-10 (10 being very satisfied, 0 being not at all satisfied) with an average of 2.6 out of 10 (n=5). They also ranked their level of preparedness for on-call duties as 2.4 out of 10 (n=5) (when 10 feeling very prepared and 0 being not at all prepared). The level of satisfaction with induction had improved by 58.8% comparing the initial cohort to the following post intervention cohorts on average. Also the following cohorts had felt 48.5% more prepared for on-call weekend duties than the initial cohort before intervention. The changed induction consisted of a tailor made PowerPoint presentation created by the junior doctors themselves with consultant input which was emailed in advance of the start of a new rotation, as well as a 1-2 hour, face-to-face session a few days into the job with a senior doctor, where mandatory departmental information could be given as well offer an informal question and answer session to go through useful on the job hints and tips. The length of the face to face induction was between 1-2 hours and the post intervention cohorts found this just right/bordering too long. They were happy with the new structure, how formal/informal the induction was and felt the content itself was just right.

Discussion:
Simple changes made to the oncology and haematology department’s induction following feedback have been shown to improve junior’s satisfaction with the induction programme as well as prepare them better for on-call duties. It must be recognised that the number of participants in this quality improvement project are small, however may reflect the small numbers of ward junior doctors that rotate through medical specialties. This quality improvement project hopefully serves as encouragement for other hospitals and departments to review their induction programmes/create an induction programme and ensure it is tailor-made to meet their audience’s needs in a fashion that is suitable for the majority and works in the NHS environment.

Ref: 017, Board: L5
Background:
Achieving adequate clinical supervision for medical students in activities that they deem useful and relevant to them is challenging within the current healthcare climate. The limitations of teaching time, teaching aptitude, willingness to teach and appropriate subject material are more highly pressured than ever before. This is problematic when studies show that students place high importance upon teachers being available, proactive and willing to provide useful feedback to them (1-3). As expectations from students rise, the health service can be seen to be guilty of inertia with its robust hold on traditional models of supervision and teaching. The established practice of supervised history taking, examination and presentation is inflexible and often marginalised to a minor role within clinical rotations. These limitations are often difficult to overcome. The apprenticeship model should provide an environment for the development of diagnostic reasoning, work ethic and extended professional behaviours (4). On this basis the authors would argue that traditional work book based assessments and rare supervisory assessment events are no longer fit or purpose.
The Bowen method provides a framework of teaching and feedback to maximise development in diagnostic reasoning (5). It advises the following terms and principles be used:
1. Data acquisition – The ability to gain pertinent information, this process is influenced by prior knowledge, context and experience (5).
2. Problem representation – The transformation of patient specific details within the acquired data to abstract terms (6-8).
3. Generation of provisional hypothesis – A narrowing of broad data acquisition to that of a more specific path.
4. Illness scripts – A method of storing pertinent information (9). With increasing experience this links into pattern recognition (10, 11).
5. Differential Diagnosis – The clinical reasoning endpoint. An information backdrop from which to plan further action. (11)
Working from the Bowen method we present a novel approach for the development of diagnostic reasoning in a flexible and financially neutral manner which promotes high levels of student engagement.

Methodology:
We asked students within clinical years to take a history from a patient with an acute problem. They gain consent for this and for a recording of the anonymised history to a mobile device. Examination findings and management plan are dictated later. Finally, a short verbal summary of the case that would be given by the clerking junior doctor on a post take ward round is recorded. The student then goes through the notes to gather any extra information they need educationally. The recording is then played back to a small group of students alongside senior or junior doctors for feedback and discussion along the Bowen approach. The recordings are deleted after playing.

Results:
Discussion:
The development of good diagnostic reasoning underpins the development of all clinicians throughout their careers. It is incongruous that we consider this a passive process with little emphasis placed upon its development within undergraduate curriculums. This method of capturing patient contact minimises the effect of the fore mentioned limitations placed upon the teacher. Mobile devices are widespread and readily available, there is therefore no requirement for NHS technology input. Recording patient contact with consent for educational purposes is permitted within Good Medical Practice (12). The students themselves are already heavily invested into the learning process having sought and found patient contact already ensuring a productive session (13). This approach also allows peer to peer learning and a joint approach between learner and teacher to problem solving.

References:


Ref: 141, Board: L6
Tracheostomy Teaching for Junior Critical Care Staff
M Clarkson
University of Glasgow/ Queen Elizabeth University Hospital

Background:
‘Displaced tracheostomy, and to a lesser extent, displaced tracheal tubes, are the greatest cause of major morbidity and mortality in ICU’ (1). Despite this, education regarding the indications for tracheostomies and tracheostomy emergencies is not compulsory until the intermediate stage of anaesthetic training (2). Patients with tracheostomies are looked after in our High Dependency Unit (HDU). Support from ICU is readily available, but foundation year (FY) doctors, advanced nurse practitioners and nurses are resident on site and could be the first to be called should a tracheostomy emergency occur. The purpose of this project was to evaluate the effectiveness of a tracheostomy teaching session for junior Critical Care staff.

Methodology:
A survey was sent via email to 70 FY doctors, 3 advanced nurse practitioners in Critical Care and 1 HDU nurse to assess their baseline knowledge and previous education regarding tracheostomies, their previous experience with management of tracheostomies, and their knowledge of how to manage tracheostomy emergencies. A teaching session was then delivered using a variety of teaching methods including PowerPoint, online voting using the learners mobile phone, case-based discussion and hands on time with the equipment. This session included: basic anatomy, indications for tracheostomies, types of tracheostomy tubes, the differences between a tracheostomy and a stoma following a laryngectomy, basic aspects of tracheostomy care, identification of tracheostomy emergencies, where to find and how to use the emergency algorithm and the tracheostomy emergency equipment boxes. The same survey was then resent to assess the effectiveness of the teaching session.

Results:
Prior to the teaching session, 55% of survey respondents had previously cared for a patient with a tracheostomy, however 71% had had no prior teaching on this. 8% of respondents stated that they would have used the emergency algorithm in a tracheostomy emergency before the teaching session, whereas afterwards 92% mentioned it in their immediate management plan. The location of the tracheostomy equipment box was also known by 8% prior to the teaching session whereas 100% knew its correct location afterwards. With regards to how to take care and maintain tracheostomies, 38% were unable to suggest any ways to perform this prior to the teaching session, however afterwards 100% were able to give at least one suggestion.

Feedback from the teaching session suggested it was well received, with the FY doctors particularly enjoying the interactive component and requesting more cases and online polls to work through.

Discussion:
The results of this project highlight that although the experienced nursing staff are highly knowledgeable with regards to the algorithm for tracheostomy emergencies and the tracheostomy equipment box, before this intervention, the junior Critical Care staff were not. Given that they might be the first to be called in such an emergency, we strongly recommend providing this education on a regular basis to provide greater patient safety should a tracheostomy emergency occur.

Different teaching styles which were used during the teaching session and the most interactive styles were preferred by attendees. This suggests that in future teaching sessions, more interaction and fewer PowerPoint presentations would be desirable and possibly attract a larger audience.

A follow up survey 2 months after the teaching session has also been sent to assess the retention of this knowledge and the effectiveness of the teaching session on longer term retention of the key points. The results of this will also be available for presentation at the conference.

References:

Ref: 324, Board: L7
What perceived effects do the anticipatory thoughts of medical students have on their initial clinical experience?
H Kingsnorth, S Gay
University of Nottingham

Background:
Transitions are common events within a medical student’s education and subsequent career (1). Key transitions include - between school and university, pre-clinical and clinical medicine and undergraduate to post-graduate clinical practice. The main area of research attention regarding medical student transitions has been focussed on the transition between the final year of medical school and the first year of practicing as a foundation year one doctor (2). However, the transition between pre-clinical and clinical medicine has been described as the most stressful for medical students with some students describing it as being ‘thrown in at the deep end’ (3). At the University of Nottingham, this transition is experienced at the beginning of the year 3 Clinical Phase 1 (CP1) module. CP1 is a seventeen-week module at a single hospital covering key topics in medicine and surgery. Prior to this experience students have had very limited exposure to a clinical setting.

Reflection is an important skill for medical students to develop and can be considered to begin before an event has even happened in anticipation of what will happen (4). Soo and colleagues found that prospectively exploring the thoughts of Canadian medical students during this transition allowed them to identify expectations and misconceptions that they hoped they would be able to address in the future (5). This information was gathered using questionnaires and narrative reflections. Whilst written reflections in this format have value they may not accurately portray reflection as a whole, which typically occurs to develop professional practice and is more often a discussion with colleagues (6). It is also recognized that written reflection may not be an accurate account of the writer’s thoughts (7). This study explores the anticipatory thoughts of medical students verbally as they experience the transition from pre-clinical medicine to clinical placements and also focusses on what the perceived effects of these thoughts might be upon a student’s experience of their early clinical education. In the future, this information may be useful when considering curriculum changes to help prepare students for transitions.

Methodology:
Using a constructivist grounded theory approach, this study is undertaking semi-structured interviews with individual CP1 students at the beginning of their clinical placement at Lincoln County Hospital. Transcriptions of these interviews will then be analysed by 2 researchers to identify themes. Themes will then be reconciled using the comparative method.

Results:
This project is currently in the data collection and analysis phase and the themes arising from the data will be available for presentation at the 2018 ASME ASM conference.

Discussion:
The results of this study will be important because:

- Transitions to Professional Practice are important and this transition is under described in the literature, and thus is relatively poorly understood.
- Greater understanding of this transition could lead to better preparation of students, a smoother transition experience and better engagement in clinical placements.
- The contribution of anticipatory reflection to medical education would benefit from further exploration.

References:
3. Godefrooij M, Diemers A and Scherpier A (2010) Student’s perceptions about the transition to the clinical phase of a medical curriculum with preclinical patient contacts; a focus group study. BMC Medical Education. 10: 28
In-Situ Simulation in the Emergency Department, is it worth it? A Systematic Review.
S Birks, A Bayston, A Graham
University of Sheffield

Background:
In-situ simulation is becoming an established part of education for core- and speciality-trainees in emergency medicine and is growing in popularity(1). It is associated with increased development of team-working, decision-making and procedural skills(2), whilst also reinforcing human-factors aspects of workplace performance(3). However, measuring the effects of in-situ simulation in the emergency department is often performed through before-and-after questionnaires or pre- and post-simulation performance measurements, and not through comparison to other teaching or simulation methods(2). The purpose of this review was to establish whether in-situ simulation in the emergency department is a superior educational activity when compared to other learning activities such as simulation in dedicated simulation centres or non-simulation teaching.

Methodology:
A literature search of CINAHL, COCHRANE, EMBASE, ERIC, MEDLINE, PubMed, SCOPUS and Web of Science (Core Collection) was performed using key terms including in-situ, simulation and emergency medicine. Reference lists from other systematic reviews and conference abstracts were also examined for additional articles. The review included all studies that compared the use of in-situ simulation in an emergency department or emergency medicine environment with another learning activity, and measured an educational outcome. SB and AB reviewed all abstracts individually and convened to agree on the final studies for inclusion.

Results:
The search returned 701 results however only two studies satisfied all the inclusion criteria. Statistically significant findings of these studies included that a greater proportion of in-situ participants requested more simulations than other participants, and that in-situ simulation provides greater perceived realism of simulation.

Discussion:
In-situ simulation in the emergency department has numerous perceived benefits but there is very little evidence to suggest that it is superior to simulation-based interventions in other environments or to other educational activities. Further research is required in this field to examine more fully the perceived benefit of in-situ simulation in emergency medicine.

PROSPERO Systematic Review Registration Number: CRD42017077194

References:

Ref: 155, Board: L9
What is the Role of Telephone Simulation-Based Training (T-SBT) in Preparing Infection Specialists for Clinical Practice?

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Newcastle Upon Tyne Hospitals NHS Foundation Trust

Background:
Over the past six months, a telephone simulation-based training (T-SBT) programme has been introduced for all trainee infection specialists (infectious diseases and medical microbiology/virology) at two large English teaching hospitals, in order to prepare these doctors for clinical practice. T-SBT has been successfully introduced in a variety of educational settings, including CPR training (1,2), pharmacy training (3,4), ophthalmology training (5), and general practice receptionist training (6). This study aims to evaluate the use of T-SBT in preparing trainee infection specialists for clinical practice by encouraging appropriate escalation of cases for senior review; sharing best practice; and raising awareness of helpful clinical guidelines.

Methodology:
A post-positivist theoretical stance was adopted throughout the course of this study. Investigators conducted a cross-sectional survey study among all trainee infection specialists at two large English teaching hospitals (n = 8). Over the course of two consecutive T-SBT sessions, trainees managed multiple scenario-based patient simulations via cordless speakerphones. After every telephone consultation, instructors provided personalised feedback on trainees’ communications skills. Trainees were encouraged to use well-validated aids to telephone communication, including the SBAR (situation-background-assessment-recommendation/request) communications tool. Following each T-SBT session, trainees were invited to participate in a Web-based, qualitative questionnaire via e-mail.

Results:
Six out of 8 trainees (75%) responded to the surveys. Trainees commented that the use of cordless speakerphones helped make scenarios feel more realistic. The relatively small group size (n = 8) was considered ideal for giving and receiving constructive feedback. Examples of the trainees’ learning outcomes were varied, reflecting the personalised nature of feedback offered after every telephone consultation. For example, trainees reflected on everything, from the need to ask more open questions, to the appropriate time to contact consultants about difficult queries. Finally, trainees commented that it was helpful and reassuring to see and hear how their peers handled challenging scenarios. In order to develop future T-SBT sessions, trainees gave a variety of helpful suggestions, ranging from starting with shorter/simpler cases to ‘warm up’, to providing visual learning aids after each telephone consultation with ‘take home messages’.

Discussion:
Although T-SBT is used regularly in certain settings, its use has not been established for the training of infection specialists. T-SBT offers a new method of teaching infection specialists, who give most urgent clinical advice via telephone, with the potential to reduce serious patient safety events. The constructive feedback received from trainees following each T-SBT session will be of relevance to an international audience, in order to adopt and develop this emerging teaching method.

References:

Ref: 103, Board: L10
Assessment Translation Process of high-stakes undergraduate SBA examination papers
L. Duffy, S. Whittam, S. Tayabba, A. Iorwerth, P. Smith
Cardiff University School of Medicine

Background:
Introduction: Cardiff University’s School of Medicine offers Welsh translations of undergraduate SBA papers—Year 1 since 2016 and Years 1/2 since 2017—aiming to aid student transition from Welsh-medium high-school education to an English medium medical course. The translated Welsh paper is offered alongside the English version.

Methodology:
Methodology: Following the International Test Commission guidelines, we undertook translation, back-translation, and reconciliation by Welsh-speaking medical personnel. We conducted qualitative narrative interviews of n=8 Years 1 and 2 students who had used translated papers and n=3 Welsh-speaking medical staff undertaking the reconciliation.

Results:
Results: 3 from 300 Year 1 students used the translation in 2015/16 and 10 year 1 students used it in 2016/2017. Among Year 2 students, 7 used it in 2016/2017. The translation process required 20 working days in 2015/2016 and 22 days in 2016/2017. Students used the translation in around 50% of questions. Both students and staff spoke favourably of the University's decision to offer the translated paper.

Discussion:
Discussion: The option of having a translated paper was warmly welcomed by students who found the translation useful. All academic staff involved in translation and reconciliation were impressed with the simplicity of the process. All interviewed students agreed the translated paper helped their performance, with enhanced confidence and improved understanding of questions relating to both scientific and social aspects of medicine.

Conclusion: The reconciliation process identified some issues around the precise conveying of meaning (in 67 of 240 questions in Year 1 2015/16). All students felt the translated paper helped their assessment performance, and all staff interviewed emphasised the importance of high-quality quality translation to achieve this. Translation of high-stakes written assessments requires rigor and attention to detail, since subtle wording changes may change the preferred answer. Our experience provides lessons for others embarking upon translation of high-stakes written assessments in medicine.

Ref: 052, Board: M1
Building A Validity Argument for the Use of EPAs in the Workplace-Based Assessment of Final Year Medical Students
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University of Edinburgh

Background:
Entrustable Professional Activities (EPAs) reflect clinically relevant tasks and learners are assessed on a scale of how much supervision they require(1). This ranges from observing only to supervising others(2). This judgement is not made of the basis of a single encounter but on the overall impression of the learner over a period of observation(1). Currently data regarding their utility as an assessment tool is limited to reports on acceptability in postgraduate education. We aim to augment the existing literature by exploring aspects of their validity with final year medical undergraduates. These include feasibility, face validity and educational impact.

Methodology:
Between March and May 2017, a large-scale pilot of two EPAs (clerking a stable patient; immediate discharge letter) were carried out in 233 final-year students at Edinburgh Medical School. These were utilised as formative assessments during the six-week student assistantship. Students were asked to complete four of each EPA over the 6 week period. They were also asked to request feedback from a variety of level of assessor. We subsequently conducted student focus-groups to explore their views on feasibility, educational impact and whether their purpose is relevant and clear (face validity). We conducted 5 focus groups in the 5 main units where assistantship students are based. The number of participants ranged from 3 to 12 (total participants=34; average number per group=6.8). Recordings were transcribed and thematically analysed.

Results:
Overall, it appears feasible to use EPAs as a way of formatively assessing final year medical students during their assistantship. There was, however, a strong feeling that it was much more difficult to obtain assessments from people who were more senior than an FY1. This was particularly challenging in surgical settings. Students understood the purpose and relevance of assessing them in this way. It was however felt that the concept was quite complicated and different from the prevalent type of workplace assessment. Not all assessors understood it before completing the form – thus reducing the face validity of their assessment. Similarly, senior doctors were often felt to not know the students well enough to make a valid assessment of their abilities and therefore their feedback was generally valued less. The educational impact of this type of assessment was generally positive. Students understood the benefit of focusing on particular clinical tasks and felt that the assessment signposted relevant tasks to them. Some also felt it motivated them to try to improve on their performance – rather than just achieve a set number or a sign-off as ‘competent’. Students generally appreciated that the assessments were formative and focused on overall performance. Several commented that this reduced the desire to use them strategically.

Discussion:
Whilst limited to a single institution this work encompasses a large number of students working in a variety of hospitals and ward environments. These were geographically spread around South East Scotland and the size of unit varied significantly. It is the first large-scale project assessing the use of EPAs in undergraduate medical education. This research augments the existing literature on EPAs by providing evidence of their feasibility and positive educational impact when used formatively - whilst also highlighting the importance of assessor training to ensure that students perceive their assessments as valid.
Based on our findings, we now plan to simplify our EPAs and engage senior assessors in further education regarding their use; thus improving understanding and subsequently the validity of the feedback received by the students. We must also consider which staff members are best placed to complete this type of assessment for final year students. To that end, we are planning a study focusing on the inter-rater reliability of EPAs. We also shortly plan to begin exploring assessor opinion of the utility of these EPAs.

References:

Ref: 384, Board:M2
Do medical student clerking portfolios reflect the balance of pathology admitted to hospitals in the UK?
W Gatfield, I Eka, M Fitzpatrick, S Gilbert, R Morgan, H Munby, I Roman, C Wright
Bath Academy, University of Bristol

Background:
Clerking portfolios aim to guide medical students through clinical experiential learning, and can encourage independent case-finding, self-awareness and reflection (1). The University of Bristol (UoB) requires Final Year medical students to complete formatively assessed clerking portfolios, aimed at demonstrating diagnostic reasoning, investigation planning and development of management plans. Anecdotally, certain pathologies are less commonly seen in student clerkings, whether it be due to inaccessibility to patients, perceptions of inappropriateness or lack of student confidence in particular specialties. The aim of this study is to evaluate the balance of pathology and specialty encountered by Final Year medical students in their clerking portfolios compared to the UoB curriculum of core conditions (2) and review how they correlate with the reality of admissions in UK hospitals.

Methodology:
We recruited 32 Final Year University of Bristol medical students undergoing their Senior Medical and Surgery placement at Bath Academy from September to December 2017. Data has been collected from each clerking portfolio during the formative assessment process at the end of placement, focusing on the coverage of presenting complaints, pathologies and specialty. This will then be compared to the list of core conditions within the UoB curriculum as well as the NHS’s Hospital Episode Statistics data for Hospital Admitted Patient Care Activity, 2016-17 (3) to assess for any differences.

Results:
We will analyse the data collected from the medical student clerking portfolios and compare this to the core conditions students are expected to have experienced from the UoB core curriculum. We will also analyse to what extent the data correlates with the spread of pathology admitted to UK hospitals.

Discussion:
We will draw conclusions based on our results, and intend to use the data to guide how the clerking portfolio may be better used and implemented in future years to improve the spread of pathology specialty and the core conditions that students should experience prior to entering the Foundation Programme.

References:
2 University of Bristol. Medicine & Surgery Curriculum for Junior (year 3) and Senior (year 5) Units. Available at: http://www.bristol.ac.uk/medical-school/hippocrates/medsurg/
3 NHS Digital. Hospital Admitted Patient Care Activity, 2016-17. Available at: https://digital.nhs.uk/catalogue/PUB30098

Ref: 223, Board:M3
'How to be a Fy1 Course’ addressing issues of anxiety and preparedness in newly qualified doctors

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Princess Alexandra Hospital NHS Trust

Background:
It has been widely established that there is a considerable step between final year medical student and newly qualified doctor (1). It is, thus, not unusual for doctors to feel anxious and under-prepared especially during their first few months of work. After creating a ‘How to be Foundation Year 1 (Fy1) Course’ the previous calendar year aimed at final year students with very positive feedback, we adapted the course for the newly qualified doctors starting at Princess Alexandra Hospital NHS Trust (PAHNT), a district general hospital in the United Kingdom. The aims of the course were to provide practical, small group teaching sessions adapted to what was required working at the hospital.

Methodology:
The course was arranged for Saturday 22nd July 2017 and occurred during the induction fortnight. Attendance was voluntary. The candidates were divided into groups of 2 and 3 and rotated around 8 teaching sessions, each 30 minutes in length. The topics included a mock on-call, a mock ward round, case based discussions around medical and surgical emergencies, ultrasound guided cannulation, death certificates, basic life support and airway skills and prescribing drugs and fluids. In total, 17 participants attended and there were 19 tutors. Feedback and questionnaires exploring anxiety and preparedness were requested straight after the event and after 4 months. Questionnaires exploring initial anxiety and preparedness were also requested from those who did not attend the course.

Results:
The feedback from the day was very positive. Candidates were requested to rate on a scale from 1 to 5, with 5 being excellent and 1 being poor:
Overall quality: Mean Average- 5.0
Overall delivery: Mean average- 5.0
Overall time-keeping: Mean average- 5.0

In regards to the individual sessions, the simulated oncall, mock ward round and ultrasound guided cannulation sessions were the most highly evaluated.

In regards to anxiety and preparedness, we asked participants at 4 months to rate on a scale from 1 to 5 how strongly they agreed with the following statements, with 5 being strongly agree and 1 strongly disagree.
In retrospect, the Fy1 course helped my anxiety levels: Mean average 4.4
In retrospect, the Fy1 course helped my preparedness levels: Mean average: 4.4

We also asked candidates to rate on a scale from 1 to 10 how anxious they were feeling, with 10 being very anxious, and how prepared they were feeling, with 10 being very prepared. We compared levels before starting work (collected during the course) and after 4 months. We received 16 completed questionnaires. Performing a paired T-test on the results demonstrated a statistically significant (p=0.0003) reduction in anxiety by 29.4 % (95% CI: 14.9%; 43.9%) and a statistically significant improvement in preparedness (p=0.0232) by 16.3% (95% CI: 2.4%; 30.1%).

Finally, in an attempt to get an idea of which newly qualified doctors are likely to attend such a course, we compared initial anxiety and preparedness levels between those who attended the course and those who did not. There were non-significant (p=0.1388) difference in anxiety levels, with the anxiety levels being on average 12.9% higher in the attended group and preparedness levels (p=0.5347), with the attended group feeling on average 4.8% less prepared.

Discussion:
‘How to be a Fy1’ courses are great ways of improving anxiety and preparedness levels in newly qualified doctors. These improvements seem to be long lasting and candidates appear to retrospectively acknowledge the impact that these course have on their long term anxiety and preparedness levels. The practical, interactive and small group teaching nature of the course ensured that candidates had an enjoyable experience. However, these courses
are not necessarily for everyone, and those who are more anxious and feel less prepared are likely to benefit the most. More studies are needed to investigate the objective impact on these courses on both candidate wellbeing and patient safety outcomes.

References:
1) Kellett J., Papagerogiou A., Cavenagh P., Salter C., Miles S., Leinster. 2015; The preparedness of newly qualified doctors – Views of Foundation doctors and supervisors; Medical Teacher, 37:10, 949-954
How well does objective examination of professionalism discriminate medical students practice commensurate with regulatory expectations?
SP Dearman, J Armer, A Swann, M Armer
Lancaster Medical School

Background:
The development and attainment of professional identity includes the need to meet the standards of the professional regulator, in the UK this is the General Medical Council’s Good Medical Practice (GMP). Whilst it can be challenging to integrate this reality of medical practice into curricular and assessment methodologies various multi-dimensional, multi-paradigmatic approaches to assess professionalism have been described including simulated situations. Within an Objective Structured Clinical Examination (OSCE) we aimed to design and assess the performance of a station using GMP as the assessment framework for professionalism. Its developmental emphasis was formative, with verbal and written feedback and access to learning resources.

Methodology:
Using an iterative approach, we constructed an OSCE station with student and actor as foundation year 1 doctors, where a medical peer appears not fit for work due to health problems. The station assessed knowledge, skills and attitude, including the duty to raise appropriate concern about a colleague, inter-professional communication and protecting patients. After the 2016 iteration, performance data, examiner and student feedback were used to improve the assessment for 2017. Subsequent examiner feedback and a student focus group were used to understand the station’s educational impact. Performance data were analysed using regression analysis, measuring reliability with Cronbach’s alpha.

Results:
Examiners and students felt the station worked well but students confused a private conversation with a colleague with the duty of confidentiality for patients, as well as the need to act promptly. Students were uncertain as to whom they should escalate concerns. Within focus groups students spoke in terms of what they “should have” done suggesting the emergence of greater insight. However, only one looked at GMP after the assessment. In 2016 examiners found the binary assessment ‘check-list’ failed to discriminate students with partial insight from those with none, thus in 2017 a qualitative global rating scale was used.

In 2016 station fail rate was 34%, R2 was 0.86 with 56% variance related to the circuit and 0.02 Alpha difference on deletion. Whereas in 2017 the fail rate was 24%, R2 was 0.80 with 20% variance related to the circuit and -0.06 Alpha difference on deletion. The inter-circuit variation in the 2016 iteration although not ideal is difficult to interpret as there were only small numbers of students; a maximum of 6 per circuit and 8 circuits in total. The professionalism station contributed to overall OSCE reliability in 2016 as Cronbach’s alpha went down on deletion but not in 2017. The correlation between marks and overall rating of performance was very good for both iterations, slightly stronger for the 2016 ‘check list’ mark scheme. Discrimination was also good for both stations, again better in 2016, 14.6% and 10.6% respectively. Discrimination between borderline and clearly passing students was less clear with a global rating scale but clearly failing or very good students were distinct. Examiners’ narrative supported the 2017 iteration’s ability to identify students who had clearly recognized the fundamental actions required.

Discussion:
The OSCE model can use a professional framework, in this case GMP, in the assessment of professionalism in the context of a situational judgement with reasonable discrimination of student performance. OSCE station design and marking should to be linked to students’ prior contextual experience where global ratings and examiner narrative appear to better assess performance. However a binary mark scheme discriminates well, but when used performance expectations need to reflect learner context. Although more work is needed to understand the impact of this approach on professional practice, graduates may benefit from revisiting these scenarios as they may feel more ‘real’ or relevant which may help to reinforce what was previously learned.

References:
1. GMC (2013), Good Medical Practice.
The Conference Concept: a novel assessment approach for year 1 medical students
S Allsop, J Howarth, F de Vocht, T Thompson, E Lloyd, J Henderson
University of Bristol

Background:
During the MB21 curriculum review at the University of Bristol, a novel 10-week phase has been established at the start of year 1, the Foundations of Medicine (FoM). This introduces the knowledge, skills and attitudes (KSA) (1) required to succeed as a medical student and future doctor. The approach is one of enquiry, to encourage development of adult learning skills (2) alongside scientific principles, in line with the GMC Outcomes for Graduates, Section 21: reflect, learn and teach others.(3) Summative examinations are often used as the assessment of choice in the early years of medical school. However, whilst examinations assess the cognitive domain, they can fail to promote intrinsic motivation for scholarship, and may poorly assess psychomotor and affective skills. As such, a novel approach to assess FoM was needed.

Methodology:
The ‘Foundations Conference: The Art and Science of Medicine’ was designed to bring students together in a community of practice (4) to present their learning experiences. Each student group (n=24) was tasked as a team to create a Pecha Kucha, a poster, and a creative piece. They were given simple guidance and templates, but freedom to choose their topics. The teams submitted drafts to a staff review panel to check for ethical or logistical issues, but no marking was undertaken. On the day of the conference, students presented their work, and formative peer and staff assessment was completed via online forms. The top three pieces from each category as voted by the students were put forward for prizes, and were awarded to the winning teams by a staff panel. Feedback data was collected as part of teaching evaluation procedures.

Results:
The students engaged well with all aspects of the conference. Topics chosen included mental health, cadaver use in medicine, and perceptions of the medical profession. The students gained diverse skills, for example, researching literature, peer teaching, using creativity to deepen understanding of illness experience, and constructive appraisal skills as part of the peer assessment. They also developed as teams, working to each other’s strengths to produce work of exceptional quality. The conference was attended by the students, staff and invited guests including the external examiner. Praise was unanimous on the standard of work and comments included, “moving” and “extraordinarily impressive”. Some of the work has been put forward for display on external websites, and requests made to exhibit the artwork more widely at the University. Examples of the works and further feedback will be presented.

Discussion:
By embracing the educational ability of our students to design and showcase their early learning experiences, we have found an exciting new method to assess all KSA learning domains. Student feedback evidenced that they found the experience enjoyable and inspiring, and it helped them to get to know their study group, develop research skills and experience a conference environment. Our vision for the outcome of the conference was epitomised in the reviews of our external visitors, “…the opportunity for students to collaboratively develop and discuss their learning with tutors and peers in the three different formats is perhaps cutting edge in terms of educational initiatives…”, “…a novel educational approach, and potentially a ‘disruptive innovation’ to the developing medical curriculum…”. The ‘Conference Concept’ allows us to bring together cognitive, humanistic and social constructivist approaches,(5) and promote skills that we want to engender in doctors of the future.

References:
Video-based examiner score comparison and adjustment (VESCA): measuring the influence of different examiner-groups on OSCE scores.

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Keele University, School of Medicine

Background:
Ensuring that medical students’ clinical skills are assessed fairly by valid means is vital to both medical education and patient safety. To accommodate student numbers, medical schools conduct Objective Structured Clinical Exams (OSCEs) in multiple simultaneous parallel circuits with different groups of examiners in each circuit. Usually there is no crossover between the students which different groups of examiners observe (i.e. fully nested designs) making it difficult to determine whether the standard of judgement applied by different groups of examiners is the same. Prior work suggests the potential for important differences.

It is highly desirable that the same standard of judgement is applied to OSCEs in different medical schools but currently no method exists to compare judgemental standards. Important differences have been observed in standard setting for written items between UK medical schools whilst significant regional differences have been suggested in clinical exams in Canada. Ensuring consistency of examiner judgements between regions is vital for any future national exam. We aimed to develop a method to measure the influence of different examiner-cohorts on students’ OSCE scores.

Methodology:
We developed procedures called Video-based Examiner Score Comparison and Adjustment (VESCA). With appropriate research ethics approval, 5 student volunteers were unobtrusively filmed on 10 out of 12 stations whilst they conducted their year 3 OSCE. Immediately after live examining duties, all examiners (8 separate cohorts of examiners, in different parallel circuits/different times) were invited to score 2 common comparator videos of student performances. Comparator videos were specific to the station each examiner had just examined. Examiners scores for the comparator videos provided crossover between the groups of examiners, enabling analyses which are not otherwise possible. Global scores were analysed using Many Facet Rasch Modelling and Checklist scores were analysed using Multi-level linear modelling to estimate the overall influence of each examiner cohort on students’ scores and to produce adjusted “fair scores” for each student.

Results:
73% of eligible examiners participated. There was no systematic difference between scores for live and video performances. Data were adequately unidimensional and fitted the Rasch model well. Examiner-group stringency accounted for up to 5.7% difference in rating scales (i.e. the same performance would receive a score up to 5.7% higher or lower depending on which group of examiners the student was allocated to). Student ability was distributed over 29 percentage points. No students failed based on the actual pass-mark of 60%. We modeled the potential effect of examiner-group stringency around an arbitrary threshold of 75% which changed the classification (pass to fail or fail to pass) of 13 out of 117 (11%) of students. Global scores showed similar findings: examiner-group stringency accounted for 0.47 out of 7 and changed the classification of 7% students. Examiner-groups ranked somewhat inconsistently between global and checklist scores suggesting different effects across measures. Students did not perceive that filming influenced their performances. Examiners indicated videos were adequate but suggested means to improve video pictures.

Discussion:
VESCA is a promising method for measuring and adjusting for the influence of different examiner-groups on students’ OSCE scores which could be used to compare groups of examiners between different locations or within a national exam. These findings occurred between examiner-groups within a single building in one medical school; larger differences between schools seem likely. Findings from this pilot study are provisional. Substantial further work is needed to develop and empirically support the filming approach; sampling requirements; and analysis methods to ensure trustworthiness before use in practice.

References:
A Bad Day at the Office: Can Video Simulation Reduce Anxiety About Situational Judgement Tests?
T Isaac, A King, L Ting
Great Western Hospital (Swindon Academy UoB)

Background:
Situational judgement tests, like the UK Situational Judgement Test (SJT) or UKCAT, are a common and validated tool for selection for undergraduate and postgraduate positions (1). Since 2013 the SJT has been part of the selection criteria for FPAS (Foundation Programme Application System). This aims to assess ‘the professional attributes expected of the Foundation Doctor’ (2).

Anxiety at the time of assessments is common and is may negatively affect candidate performance in MCQs as well as impacting on student welfare (3,4).

We identified that video simulation of scenarios in which professional attributes were tested could lead to improved professionalism and reduced anxiety relating to the SJT in Final year medical students in the UK. We aimed to create a tool which could deliver this to a large number of students in multiple centres.

Methodology:
We are creating an interactive Video simulation of clinical scenarios (e.g. a morning ward round) in which situations testing ‘professional attributes’ arise. We identified scenarios posed in the Foundation Programme SJT practice paper that could be linked together into a narrative. We have filmed these scenarios from the perspective of an F1 doctor using a GoPro ™ and are editing this with Final cut™. Opportunities to assess these scenarios and answer practice related SJT questions were placed within the video simulation. Answers will be recorded during these pauses using Turning Point™.

We plan to pilot this teaching tool amongst 4th year medical students with a view to making it available to 5th years prior to their SJT in 2019.

We will assess anxiety relating to the SJT by questionnaire before and after taking part in the video simulation.

We also plan to assess if the video improves decision making time. A group of student will be asked to sit a number of SJT questions before and after the session and will be timed to see if the teaching session helps them work through SJT style questions faster.

Results:
The project is currently ongoing but we plan to pilot this teaching tool amongst 4th year medical students with a view to making it available to 5th years prior to their SJT in 2019.

We will assess anxiety relating to the SJT by questionnaire before and after taking part in the video simulation.

We also plan to assess if the video simulation makes students quicker at completing SJT questions as time constraints is a common student concern in relation to the exam. Students will be given a selection of SJT mock questions before and after using the video simulation and timed to see how long it takes to complete them.

Discussion:
We have devised a novel tool for delivering teaching regarding professional attributes to a large number of students in multiple centres.

We hope to demonstrate its efficacy in fostering attitudinal learning about professional attributes. We hope it will also reduce student anxiety about situational judgement testing will have also reduced.

References:


Ref: 174, Board: N1
A pilot surgical teaching programme for undergraduates’ improved confidence in surgical skills and increased interest in surgery as a career

KS Arun
Whipps Cross University Hospital

Background:
The ability to clerk surgical admissions and perform basic surgical skills is an important skill for newly qualified doctors, as recommended by GMC’s Tomorrow’s Doctors1. The surgical experience of newly qualified junior doctors varies widely. This, together with the waning interest in surgery as a career among medical students, is a serious issue confronted by the NHS. We evaluated the impact of a pilot surgical teaching programme that focused primarily on better preparing final year medical students for surgical clerking and basic surgical skills.

Methodology:
A questionnaire was sent to 40 surgical foundation doctors to identify areas that would be most beneficial to receive teaching on to best prepare students for a surgical job. Based on this feedback, a pilot surgical teaching programme aimed at improving students’ surgical clerking and basic surgical skills was delivered to 30 final year medical students. The programme involved pre-course reading, lectures, practical skills teaching, simulation scenarios, case-based discussions and post-course summary sheets. Students’ attitude to the teaching programme and pre- and post-course confidence levels was assessed immediately after the course, and after 1 month.

Results:
The questionnaire directed at the surgical foundation doctors identified surgical clerking and basic surgical skills as the 2 areas most essential to a surgical job. The pre-course questionnaire demonstrated that students from the same medical school had on average 9 weeks of surgery (range 4-14 weeks) during their 6 years at medical school. Results from the pre- and post-course questionnaires demonstrated that of the 30 students who attended, 27 felt the course prepared them well for working as a FY1 (90%) and 30 found the course useful, enjoyable and would recommend the course to a colleague (100%). The course produced a statistically significant increase in the students’ confidence at clerking surgical admissions (Mann-Whitney test, p<0.05) and performing basic surgical skills (p<0.05) and a statistically significant increase in interest in a surgical career (47% to 73%, p<0.05). A follow-up questionnaire 1 month after the course was completed by 20 students (67% completion rate), and all 20 students reported that they remained ‘very confident’ or ‘confident’ in performing surgical clerking or basic surgical skills.

Discussion:
Our pilot surgical teaching programme proved very effective at increasing medical students’ confidence in clerking acute surgical admissions and performing basic surgical skills. This confidence was maintained one month after the course. Medical schools should consider introducing further surgical training to better prepare students for surgical jobs, as well as increase interest in surgery.

References:
General Medical Council (GMC), 2015. Outcomes for graduates (Tomorrow’s Doctors)

Ref: 267, Board: N2
A simulation to help prepare undergraduate students for in-hospital on call shifts
A Ball, D Chevalier
Blackpool Victoria Hospital

Background:
A survey of Blackpool Foundation Year One (FY1) doctors found limited training in being the on-call bleep (pager) holder. Interestingly, we could not find any direct mention in Tomorrow’s Doctors for preparing undergraduates for this (1). Working out of hours, on-call and with a reduced workforce is a known area of angst amongst Junior Doctors, more so as a new FY1.
We designed and ran a simulated teaching programme which would allow students to experience the pressures of working on call. Utilising clinical skills areas as well as hospital wards, we hoped to emulate real internal and external stressors, whilst always within a safe environment.
The aim was to better prepare students for their role next year through this unique learning opportunity. Hopefully, creating new found confidence and reducing future stressors.

Methodology:
Final year medical students were each given a pager for an hour. Students received ‘bleeps’ from a supervisor who role-played a concerned nurse with a clinical scenario. Each task was held in a folder located on different wards and did not involve any patient interaction or information. Each student was started on different task at a five-minute interval.
Tasks were designed to be relatively simple, aimed at a student’s resourcefulness, communication and triage skills. Ward managers had been contacted prior to designate an appropriate area for the folders to be held within the ward.
Online and physical resources were available as well as the contact number for the medical registrar on-call, played by the supervisors. The aim was also for participants to pass each other in corridors to either aid clinically or emotionally.
Tasks included: interpret an ECG, rewrite a prescription chart, prescribe warfarin, confirm a death, review a blood result, write a discharge letter and review an acutely unwell patient.
The final station was always the unwell patient aimed at drawing the student immediately to this scenario.
Using Pendleton’s rules a facilitated feedback session explored students positive and negative experiences, angsts and coping mechanisms in each station (4). Students completed a feedback questionnaire after the session and another six months into their FY1 year.
Costs for the programme were minimal. Physical resources amounted to printing and a pager for every student which we were able to loan from the education department.

Results:
From a cohort of nine final year medical students five responded. Using a five-point Likert scale, students completed a feedback questionnaire with three additional free text questions. Results were resoundingly positive with students taking great confidence from the programme.
During the open feedback session students valued using open wards and having to navigate in an unfamiliar hospital as a realistic preparation for next year. Personalised feedback was also much appreciated.
Students were contacted six months into their roles as FY1 Doctors. A further questionnaire returned excellent feedback and appreciation for our programme in preparing them to being on call.

Discussion:
Being on-call is an inevitable part of a junior doctor’s progression and we believe there is scope for better preparation within undergraduate training. Overall the feedback was extremely positive, with 100% believing this should be available to all students.
We have developed an effective and sustainable simulation that has shown excellent results at the time of teaching and one year on.
Due to the positive reaction and low maintenance of the project, we aim to cement our teaching programme as a permanent feature for undergraduate students at Blackpool Victoria Hospital. We are also working with University of Liverpool and hope to introduce the programme to other hospitals regionally.
References:

Ref: 116, Board:N3
An Update: A prospective study to compare teaching of intimate examinations by Clinical Teaching Associates (CTA) with traditional methods in multimodal platform.

L Kelsey, H Bothwell, S Canning, H Claireaux, A Radford, K Jones.
Great Western Hospital (Swindon Academy University of Bristol)

Background:
Clinical Teaching Associates (CTAs) are lay people trained to teach intimate consultation and examination skills using their own bodies1. Worldwide CTAs are used to teach pelvic, rectal, breast and testicular examinations with the UK having significantly lower levels of use compared to the US and Australia2.
The Swindon Academy offers a CTA programme that covers a wide range of intimate examinations. The Female Pelvic CTA programme has been running since 2011 and consistently reports favourable outcomes in comparison with traditional teaching (manikins or anaesthetised patients). Female Breast CTA in its 2nd year and is offered to both 3rd and 5th year students. Finally, the Male CTA programme was introduced this year for 3rd and 5th year students and has had very positive feedback. This study aims to evaluate the data from the whole CTA programme at the Swindon Academy to show it is superior to traditional methods and therefore be implemented into all undergraduate medical curriculums.

Methodology:
Data is collected prospectively as part of an on-going study; participants attending CTA training in Swindon are asked to complete a questionnaire about their experience. Participants attend in groups of 2 or 3 lead by the CTAs. The sessions involve a role play of a scenario that would be involved in a well-woman/well-man check. During the role play participants explore taking consent, offering chaperones and explaining the procedures. Following this participants perform the intimate examinations of the CTAs. Immediate feedback is given during the examination to the participant to guide and improve their examination technique. After the session, the participants are asked to rate their confidence (out of 10) in various aspects of pelvic examinations before and after the session. We also asked them to compare the CTA session with ‘traditional’ teaching on pelvic examinations they have received. Qualitative feedback about the session was also gathered.

Results:
To date 314 students have attended the female pelvis CTA session, 66 students have attended the Breast CTA session and 33 students have completed the male pelvis CTA. All participants demonstrated increased confidence in all aspects of the intimate examinations following the CTA sessions. Our findings, to date, indicate that CTA teaching is considered superior to traditional methods, both from undergraduate and postgraduate feedback. Data collection is on-going and will analysed in full when the cohort of 2017/2018 have completed the training in June 2018.
Quantitative feedback from participants is very positive about this teaching for example stating:
“Thank you very much for today, it was so helpful. I feel much more confident with intimate examinations.”
“This was a great session, the best teaching I have ever received on an intimate examination. Thank you for helping prepare us for examinations.”
Analysis of qualitative feedback from open questions is on-going.

Discussion:
Intimate examinations are a difficult skill to teach. However, this study supports existing data demonstrating that CTA teaching is superior to traditional methods for learning intimate examinations. The UK lags behind the rest of the world in its implementation of CTA-lead training. This study hopes to reinforce that all UK medical schools should offer CTA training to teach intimate examinations.

References:
Combating “ethical erosion”: where does Newcastle Medical School teach compassion and empathy in Undergraduate Medical Education?
A Verrinder, H Alberti
Newcastle University

Background:
Growing research suggests compassion and empathy diminish alongside increasing clinical experience(1,2,3). This phenomenon, occurring throughout medical training worldwide, is termed Ethical Erosion(4). Annually Newcastle Medical School announces intent to produce compassionate doctors(5); outlining a curriculum to achieve this using various standards set by the GMC(6). This study aims to assess where Newcastle University formally teaches compassion and empathy whilst investigating if those efforts are efficacious.

Methodology:
A modest qualitative research project including a literature search, curriculum review and facilitated focus groups. Discussion with 9 and 7 students respectively, assessing awareness of ethical erosion, undergraduates beliefs surrounding causation of the phenomenon and their ideas regarding effective teaching on compassion and empathy. Content analysis was used to analyse the transcription and the results reported as themes(7).

Results:
6 major themes were elucidated; Empathy being “developed not taught”, Newcastle prioritizing empathy and compassion teaching above other schools, Differing effectiveness of teaching styles, Phenomenon beyond medical schools control, Disconnect between skills taught to students and those valued in practice and “Ethical erosion” being protective.

Discussion:
Newcastle students believe role models, small group teaching and clinical experience enables them to develop empathy and practice displaying compassion. Students acknowledged GP placements as the best environment for this development. Further research to evaluate efficacy of teaching methods, compare different medical schools curriculum and analysis of how medical schools measure competence of these skills is necessary. In future investigation into external factors causing ethical erosion could produce constructive adaptations to the undergraduate curriculum.

References:
Cultural competence in UK medical education
S Li, E Gill
GKT School of Medical Education, King’s College London

Background:
Cultural competence and diversity education (CCDE) is delivered in most UK medical schools1,2. However, training remains patchy. Endeavours have to be made to seek clarity of competency domains, teaching methods, and skill sets required in CCDE 3. The UK Group on Diversity in Medicine and Health (DIMAH) supports diversity and cultural education across UK health schools. In 2016, they collected poster reports from 24 medical schools on their CCDE. In this presentation, we present the results of a thematic analysis of these 24 posters, aiming to provide an overview of the status quo of the CCDE in the UK, and potentially inform further research and educational development.

Methodology:
With permission from DIMAH committee, 24 publicly available posters were downloaded from the DIMAH website. Contents were converted into word/pdf documents and imported into NVivo for data analysis. Texts were analysed thematically to identify ‘what is taught’ and ‘how is it taught’.

Results:
CCDE varies drastically across the institutions. The following themes emerged from the analysis:

Institutional support:
• Drivers of CCDE include GMC requirements, ethical obligations, and winning awards (e.g. Athena Swan).
• Some medical schools reported research-led curriculum reforms; while some indicated the difficulty to have a designated academic lead.
• Widening participation contributes to building a culturally diverse student population, adding to institutional cultural competence. However, there seems to be some confusion over promoting equality in medical school as opposed to diversity education, which is a pedagogical activity.

Teaching content:
• Most schools recognised culture as a multifaceted concept that captures all social determinants.
• Terminology used to define the subject mainly included cultural competence and diversity.
• Cultural attitudes, awareness, knowledge and skills are the major domains, with a strong focus on cultural knowledge and skills.
• Teaching mainly focused on competence development at the individual level; some mentioned interprofessional education, which develops cultural competence at the team level; however, few mentioned developing competences at the institutional and systemic levels 4.

Pedagogy
• 14 medical schools used a spiral curriculum model, with content embedded in different subjects across all years. One school used a vertical model with sequential delivery from year 1 to year 5. Three had stand-alone sessions. Six mentioned approaches such as problem-based teaching or case-based teaching.
• Teaching formats included lectures, interactive workshops, peer-led teaching, online resources, community-based learning, reflective personal learning document, self-directed learning, and student-selected components.
• Assessments included reflective writing, MCQs, project reports, presentations and peer review. Incorporate CCED into OSCEs was desirable.

Challenges
• Timetabling, clinical integration, and collaboration in research and education.
• Lack of culturally diverse patient population for medical schools in more homogeneous rural areas.

Discussion:
Different approaches to CCED have their own pros and cons, and respective challenges. Seemingly some medical schools are more advanced than the others, which is manifested in the varied amount and depth of teaching these schools deliver. This, to some extent, is related to the level of institutional recognition of the CCED, and whether there is a designated academic lead on the subject. More educational research is required to provide better understanding of the effects of different pedagogical approaches, and how they can be better implemented at different types of medical schools. We argue that cultural competence development does not just take place in structured teaching, but also in extracurricular activities. This is being investigated by the authors. The outcomes will hopefully shed more light on the future development of CCED.
References:


Ref: 160, Board: N7
Developing a peer student mentorship program: Lessons learned
L Ting, H Bothwell, D McCluskey, S Mullens, K Jones
University of Bristol, Swindon Academy

Background:
The positive effects of mentoring medical students have been widely documented. Benefits include improving confidence, aiding students to adapt to new environments and career counselling.(1)(2) Mentors of varying seniority have different advantages; clinicians are more able to provide career advice whereas medical student peers are approachable and familiar with the undergraduate curriculum.(3) However, literature on the use of student mentors is limited and requires further exploration.(4)

Using student mentors is cost-effective and benefits both mentees and mentors.(1) It provides mentors teaching experience and can consolidate their own knowledge.(5) This study aimed to establish a peer-based mentoring scheme for medical students in their first clinical year and to allow senior medical students to act as mentors.

Methodology:
Third year and final years students from Bristol University based at Great Western Hospital have placements in general medicine and general surgery lasting 18 and 12 weeks respectively. We offered the final year students the opportunity to mentor third year students in their first clinical year. As the final year students were approaching exams, participants were divided into groups of 2 or 3 mentors to 1 mentee. The mentors were provided with training and support from the university. Meetings were arranged voluntarily between mentees and mentors. The program ran for one term. All participants were requested to complete a questionnaire at the end on their experiences which generated quantitative and qualitative data.

Results:
Data was collected from 8 out of 9 mentees and 21 out of 23 mentors. 5 out of 9 mentees met their mentors and rated the experience positively. However, only 2 mentees felt they had a sufficient number of meetings. Most mentees did not meet all their mentors or favoured one more than others. Of 23 mentors, 8 met their mentees. 5 mentors rated the experience positively and 4 rated it negatively. Most participants met once a month or less though one mentor who met their mentee more frequently rated the experience as excellent.

Qualitative data identified key themes. Mentees reported that the advantages of student mentors were familiarity with the mentee’s curriculum and that “they know what it’s like to be a student”. Whilst all mentees who were able to meet their mentors found the experience positive, dissatisfaction arose from difficulty arranging meetings due to clashing schedules and mentees not wanting to disturb their mentors near exams. Furthermore, multiple mentors for each mentee resulted in frustration amongst mentors when their mentee did not utilise them. Areas most focused upon during meetings were bedside teaching and examination. Pastoral support was focused on the least.

Discussion:
The short duration of this study caused it to favour some aspects of mentoring such as bedside teaching more than others like pastoral support. Unfortunately, long term mentoring is difficult to achieve as students are distributed across many different sites and rotate to new ones each term.

If this scheme were to be repeated, we would encourage mentors to initiate the first meeting as junior mentees are still settling into the clinical environment and are not used to such a proactive learning style. Boundaries regarding when to contact mentors should be established so mentees are not afraid of disturbing their mentors. Either the number of mentors should be limited or mentors should be assigned as a main mentor and backup mentor to avoid frustration if not contacted by the mentee. Protected time for mentoring could be considered(1) but this is difficult to implement and may undermine the proactivity that mentoring fosters.

This study provides important insights into the difficulties of developing a mentoring program. Further research is needed to explore the most practical approach in designing a program that benefits both student mentees and mentors.

References:
Development of a paper-based simulated on-call session for final year medical students
K Biddle, R Pollard, E Hughes, K Dave, J Bassett
Countess of Chester Hospital

Background:
The prospect of starting FY1 on-calls remains a source of anxiety for many final year medical students. Studies have demonstrated that students often feel unprepared for the job and lack experience in important skills such as task prioritisation (1). In order to address these issues, simulated on call sessions have been developed throughout the country and found to increase confidence surrounding on-call duties (2,3). Many of these sessions involve high-cost, resource-rich simulation mannequins (4). Whilst the use of high fidelity simulation carries many advantages, its cost currently precludes its utilisation for the majority of students. Paper based simulation sessions have been developed as a more cost effective alternative and studies have found them to be useful despite lacking the element of stress surrounding patient contact and assessment (5). Our study involves the development of a low cost, paper-based simulation session for medical students. In order to create an additional element of student anxiety, facilitators assume the role of nurses who intermittently enter the room and ask for guidance on what management and observations are needed to be performed.

Methodology:
All final year medical students undertaking a ward shadow rotation at the Countess of Chester Hospital from September 2017 are being invited to take part in the programme. Each week, two-hour sessions are facilitated by two FY2 Doctors with two students participating simultaneously. Students are firstly briefed regarding the use of the bleep system and the hospital intranet guidelines prior to receiving a handover of clinical tasks. Following the handover, students undergo an hour “on call” during which time they are bleeped about unwell patients, in addition to routine tasks such as warfarin prescription and TTO completion. All clinical cases are paper based and involve the interpretation of mock notes including observation charts, blood results and imaging studies. Participants are instructed to document a diagnosis and management plan and discuss this with a “nurse” on the ward (a facilitator). During the time on call, students have the opportunity to bleep a senior for advice (one of the facilitators acting as the medical registrar). Following the hour on call, students handover remaining tasks and are debriefed on clinical knowledge and skills such as prioritisation, communication and task delegation. Students are asked to complete questionnaires including a 5 point Likert scale assessment related to pre- and post-session confidence in six areas: the use of the bleep system, the management of an acutely unwell patient, prescribing on a drug chart, the use of guidelines, handover with colleagues and prioritisation skills. Students also have the opportunity to give free text responses regarding the teaching programme including positive aspects and areas for development and improvement.

Results:
Analysis of pre- and post-session confidence ratings will be presented at the conference in addition to general student feedback.

Discussion:
Our model aims to build upon previous simulated on-call sessions and to increase student anxiety with the inclusion of nurses asking for immediate management plans. The results will demonstrate whether this programme provides an effective and cheap alternative to high-fidelity simulated on-call sessions. We will analyse feedback to identify areas for development and improvement and incorporate changes into future teaching sessions.

References:
2 Ramsden, N., Newman, J., Cooper, R., Wilson, A. ‘An hour on call’ – simulated medical education, Future Hospital J, 2016: 3(2), 41
5 M Toolan, C Rowden, J Ferguson, A Finlay, N Jakeman. Keep calm and carry on on-call”: Exploring the best model of simulated on-call training for Final Year Medical Students. Conference Papers and Abstracts, ASME Annual Scientific Meeting. 2017: p243

Ref: 114, Board: N9
Diagnostic Reasoning, Time To Change?
G Squire, R Keegan, S D’Sa, R Malhotra Mukhtyar, F Wilson-Morkeh, R Hsu
University of Leicester

Background:
The current working pressures on qualified clinicians of all levels are well documented (1). The lack of flexibility afforded by traditional teaching environments such as ward rounds and clinics, where pressures are set externally and are not controllable by the learner or teacher, compounds this issue (2). The apprenticeship model advocated for at all levels of medical education is continually being eroded. An ideal apprenticeship should provide an environment for the development of diagnostic reasoning, work ethic and extended professional behaviours (3). However, the premise of this model centres on the availability of the teacher for the learner, a presumed level of teaching aptitude in clinicians who interact with students and an abundance of appropriate subject material. These limitations are often difficult to overcome.

The Bowen method provides a framework of teaching and feedback to maximise development in diagnostic reasoning (4). It advises the following terms and principles be used:
1. Data acquisition – The ability to gain pertinent information influenced by prior knowledge, context and experience (4).
2. Problem representation – The transformation of patient specific details within the acquired data to abstract terms (5-7).
4. Illness scripts – A method of storing pertinent information (8). Derived from previous patient exposure and the association of these interactions with disease processes (4). This links into pattern recognition (9, 10).
5. Differential Diagnoses – The endpoint, an information backdrop from which to proceed. (10)

Aligned with these principles we present a Peer Learning Set facilitated by clinicians for the development of diagnostic reasoning. This permits a manner of cognitive apprenticeship (11) which is flexible, fiscal and student-led.

Methodology:
We asked students within clinical years to take a history from a patient with an acute problem. They gain consent for this and note down the key points of their history, examination findings and management plan. In a later “buzz” group seminar (11), the student takes on the role of the patient while their peers begin the diagnostic process facilitated by supervising clinicians using the Bowen framework. Facilitators correct misunderstandings but also provide active insights into their diagnostic reasoning as the histories are being undertaken by the students. Facilitators include currently practising and retired clinicians. This reverses the traditional “Grand Round” idea of case presentations to one in which the audience is actively exercised in undertaking clinical diagnostic reasoning.

Results:
Data capture is ongoing; we will look at exam performance and gather qualitative data surrounding confidence improvement in diagnostic reasoning. Results will be available at the time of the ASME conference.

Discussion:
Diagnostic reasoning is a key educational goal of undergraduate and postgraduate medical education. Yet little time is afforded on curriculums to concentrate on this skill. Our method of capturing patient contact allows for teaching within a more flexible environment that gives control back to the learner and the teacher. It is cost neutral using facilities already available. Having students seek out their own cases empowers them, and maximises the time that the clinicians have to spend teaching; rather than on logistical tasks. It is generally accepted that “real life” situations are more helpful than textbooks (12), and in this way other students are also able to benefit from the patient without having direct contact (13). Our approach enables peer-to-peer learning with a collaborative approach to problem solving. Overall, we have found this approach to be easy to setup, popular with the student cohort and useful for imparting teaching and feedback on diagnostic reasoning based on established academic principles.

References:

Ref: 144, Board: N10
Does 'in-situ' simulation have a role in preparing final year medical students for their foundation years
H Tulloch, T Thompson, T Weetman
Eastbourne Hospital

Background:
The move from medical student to foundation year one (FY1) is a daunting one. Previous research has shown graduates from medical schools in the United Kingdom (UK) can feel under-prepared for working life. A survey undertaken 11 years ago indicated that 40% of UK medical school graduates felt under-prepared for working as a doctor. There is often a disconnect between the knowledge expected to pass medical school finals and the skills required to be a safe and competent doctor. Moves to address this disconnect have been implemented nationally, such as the prescribing safely assessment (PSA) and locally such as ‘preparation for practise’ courses run by individual medical schools. Eastbourne District General Hospital (EDGH) education department has set up a voluntary session of in-situ simulation for medical students attached to the hospital. The aim was to simulate an out of hours on-call session in order to improve medical students preparedness for clinical practise.

Methodology:
Medical students were given a bleep and ‘bleeped’ with jobs to do around the hospital. Mock patient notes in folders were left on wards and medical students were expected to analyse these and come up with appropriate management plans. Skills required included data interpretation, prescribing and making telephone referrals. The session ended with a simulated medical emergency in our sim suite followed by a 30 minute ‘debrief’ where candidates were invited to talk about aspects they found challenging. Prior to the session the students were given a questionnaire where they had to rate their level of preparedness of some key FY1 skills. This questionnaire was repeated following the exercise.

Results:
Significant improvements were seen in all domains. Prior to the exercise only 23.5% of medical students either agreed or strongly agreed with the statement ‘I feel prepared to manage an acutely ill patient’. Following the exercise this number rose to 82%.

Discussion:
We have shown that running sessions in which medical students are immersed in the on-call environment can improve their perceived preparedness for their first on-call shift. We would like to ensure all medical students receive this opportunity and it becomes a more established part of medical school curricula.

References:
Early Surgical Exposure For Medical Students: Efficacy and Effect on Choice of Electives
C McGuire, T Dow, K Moran, D Davies
Dalhousie Medical School

Background:
Research has shown that the number of medical students applying to surgical residency programs is declining. The reasons are multifactorial, however early surgical exposure has been shown to increase application rates and decrease residency attrition rates. The objective is to evaluate the Surgical Exploration and Discovery (SEAD) program, an early surgical exposure program, on its efficacy and influence on medical school electives. The program, which was initiated at the University of Toronto in 2012, is a structured surgical program where first year medical students dedicate two weeks of their summer to surgical skills workshops, operating room observerships and seminars discussing surgical lifestyle, research and specialties

Methodology:
Two online surveys were distributed to all students who participated in the SEAD program from 2016-2017. The surveys addressed demographics and prior surgical exposure, efficacy of the program, and the role of SEAD on influencing choice of electives. The Likert scale was used to measure responses along with checkbox and multiple-choice questions. Univariate descriptive statistics were completed on all variables.

Results:
36 students participated in the study (100% response rate). Students were typically male with a bachelor’s degree, between the ages of 25 and 26, and had observed 6-10 operating room (OR) half days and two surgical specialties prior to SEAD. Students reported that SEAD made them more likely to enter a surgical career (Mean: 4.1 out of 5, SD: 0.8), helped narrow down career options (Mean: 4.0, SD: 0.9), and improved comfort in the OR environment (Mean: 4.7, SD: 0.5). The majority of students were planning to, or had already, completed at least one surgical elective in second year (72.2%) and felt that the program will influence their choice of electives in fourth year (Mean: 4.0, SD: 0.6).

Discussion:
The SEAD program is an effective method to help students make surgical career decisions, offer early surgical exposure, and help with choice of medical electives. With a lack of early surgical exposure, declining interest in surgical programs, and increasing residency attrition rates, the SEAD program is a valuable addition to medical school education.

Ref: 145, Board:P2
Electronic marking in practice sessions to improve student experience
A Draycott, N Downer, K Ramsay.
University of Nottingham

Background:
At our hospital we run a timed clinical examination skills practice session for our final year medical students to give them practice for their end of year assessments.
In line with our medical school exams we have introduced electronic marking of this session to improve the feedback we give to students in terms of the content and speed.
We have developed a “google form” that is downloaded to a tablet device which the examiner then uses during the assessment session; this includes station specific marking as well as free text for constructive comments. The feedback is then collated and e-mailed out to students. We can also use the data to compare examiners marks and give feedback on their performance as well.
The overarching purpose of this project has been to give students timely and relevant feedback on their performance.

Methodology:
In line with Kirkpatrick’s learning evaluation model we would be considering the following aspects:
Reaction – feedback would be sought the day after the event to gather the students opinions on having received their feedback electronically i.e did they like it?
Learning - At the same time we would seek feedback on what they had learned from the session and whether they learned more by seeing the things the electronic feedback afforded them such as their position within the group and individualised feedback on their individual performance in each station.
Behaviour- Feedback would be sought after their real exams to see if what they learned from the feedback changed the way they approached the exams or the revision period prior to the exams e.g. did they revisit it as a means of revision or reflect back on it during the exam.

Results:
Results - It is hoped that our predominantly Generation Z students would appreciate the speed and accessibility of their results as well as the opportunity to revisit them at any time.
In terms of targeted outcome we would be asking the students whether they thought the method had had a positive impact on their performance i.e. did they pass?
We hope also to be able to provide valuable feedback to our volunteer examiners on their style and comparison to others.

Discussion:
As part of the collated results sent out to the students, our teaching fellow also plots a graph so that they can see where they sit in relation to the rest of the group for each station. This should enable them to focus their areas for revision.
Although the study is not yet complete, initial feedback from the students is positive. Full results will be available at time of conference.

References:

Ref: 005, Board: P3
Enhancing empathy in undergraduate psychiatry: a multimodal approach
A King, S Arulanandam
Swindon Academy, Great Western Hospital

Background:
Medical students experience mental illness at a higher rate than the general population (1) but it is argued that medical professionals are not sufficiently engaged in fighting stigma and discrimination related to mental illness (2), and in fact can become contributors to iatrogenic stigmatisation. Teaching empathy is a controversial and difficult subject, with evidence that empathy declines during medical school (3), and a lack of high-powered multicentre evidence to evaluate current methods of teaching delivery. Modes of delivery that have some evidence are: experiential learning interventions, dramatic interventions and reflective prose. Recent studies have demonstrated that nursing students develop more understanding, patience, and kindness toward patients following a session whereby they ‘experience’ auditory hallucinations (4). Therefore at Swindon Academy we have integrated dedicated multimodal empathy-themed teaching into the psychiatry placement in a bid to enhance undergraduate empathy towards mental illness.

Methodology:
Students undertaking their six week psychiatry block at Swindon Academy were invited to take part in additional teaching sessions based around the theme of empathy. They included: watching back video of them performing in a psychiatry simulation scenario, experiencing mock third person auditory hallucinations via headphones whilst completing a series of tasks and, lastly, reflection upon their experiences with application to their behaviours towards patients with mental health issues.
A separate cohort of mixed-year medical students at their Excellent in Medicine Day will be invited to take part in a workshop whereby one station duplicated the ‘hearing voices’ scenario, and a post experience questionnaire will be completed. The Jefferson Scale of Empathy –Student Version (5) will be used to collect data from all students, and a focus group held for the psychiatry students to discuss themes drawn from the quantitative data.

Results:
Results are pending and statistical and applied thematic analysis will be conducted upon completion of the students psychiatry block and after the Excellent in Medicine Day – Feb 2018.

Discussion:
Full discussion will be available upon completion of the results analysis. Larger scale rollout of dedicated empathy-themed teaching for more significant student numbers will be the next expected step to enhance the validity of this study currently underway.

References:

Ref: 262, Board: P4
Establishing Student Grand Rounds to Promote Presenting skills and Peer Teaching

P Solanki
Princess Alexandra Hospital Nhs Trust

Background:
Presenting in front of peers is a required skill as a medical practitioner. Presentations come with many advantages, which many of them are extremely useful at becoming good clinicians, such as strengthening the clinical knowledge, improving communication, and sharing experiences and knowledge and many others. However, presentations have its own drawback with many studies show that people often find presenting in public stressful, embarrassing and fearful (1). Subjectively, it appears that relatively few students get an opportunity to prepare and deliver presentations until qualification. For the aforementioned reasons, the Princess Alexandra Hospital (PAH) educational team has introduced a scheme where students run their own ground round style presentations, in order to use as educational tools for teaching clinical medicine. Other aims included improving the presentations skills and gain experience at presenting in front of peers.

Methodology:
In total, there have been 12 groups of 4 to 5 third year students on placement at PAH over the past 15 months. Each group of students were assigned to different modules based on their medical school curriculum and requirements. Students were encouraged to find an interesting patient case related to their module and create a 10 minute power-point presentation based on the case, with 5 minutes explaining the clinical picture and 5 minutes teaching on a related topic. The students presented in front of their peers and a senior clinical teaching fellow. Questions and discussion afterwards were initiated and led by the students and the teaching fellow only interjecting if required. Students were then asked to fill in questionnaires about the experience.

Results:
There have been 50 students who have had the opportunity to participate in a student grand round. Students were asked on a scale from 1 to 5 how strongly they agreed with the following statements, with 5 being strongly agreed. The scores below are mean averages. All students either agreed or strongly agreed with all the statements.
I found student grand round to be useful for my own education – 4.8
I found that my peers’ presentations were of good quality- 4.6
I found it useful presenting cases in front of my peers- 4.7
I think all medical students should participate in a student grand round- 4.7
Students were also asked to comment of the sessions. Comments include that the session was very useful just before exams and that it gave a taste of presenting in front of colleagues and is a very good way of learning a number of topics in a short period of time.

Discussion:
Student grand rounds are a great way of getting students interested and gaining experience in presenting to their peers. The results show that students found the scheme useful for their own medical education. The contents and quality of the presentations were also of high quality and overall all students found this teaching method useful. Having the opportunity to find an interesting case and teach their fellow peers about the topic seemed to empower the students and they found the process enjoyable. Further studies are required to see whether having these experiences at an earlier time makes any different to the student’s ability and willingness to present in the future.

References:
Evaluating the usability and acceptability of the discharge summary feedback (DSF) tool – field-testing with final year assistantship students.

R Kinston, E Bartlett, L Brindley, C Cathcart, S Kalidindi, H Pierce
Keele University

Background:
Accurate and timely transfer of information about patient care and treatment across the healthcare interface is vital to ensure patient safety. UK survey data of GPs reported that this information is frequently inadequate (1). Foundation doctors are responsible for producing the majority of discharge summaries. Most receive no training as part of their medical degree and that received subsequently was frequently felt to be inadequate (2). The GMC recommends that all senior medical students undertake assistantship training prior to graduation (3). During the assistantship it is desirable that students gain experience of all the duties performed by foundation doctors (4). Supervised participation of this type actively promotes learning, allowing the student to develop necessary technical and non-technical skills required for graduate practice (5). Work based observation and feedback has shown to enhance learning. Our aim is to develop and evaluate a discharge summary feedback (DSF) tool that could be used to enhance the acquisition of this skill amongst senior medical students.

Methodology:
- Development of the DSF tool
  National recommendation of the core content of a discharge letter was reviewed (6). We also searched for work based assessment tools designed to assess clinical correspondence. Currently those available are limited to assessing paediatric letters (7) and to our knowledge they have not been utilised for medical students. Utilising focused discussion on content and form the DSF tool prototype was created. Faculty members at Keele University (all practising clinicians) and a range of junior doctors from one of its teaching hospitals were involved in this process. We used an iterative approach of review and refinement to develop the DSF tool until consensus was reached.
- Field testing the usability and acceptability of the DSF tool
  The DSF tool was initially tested in 2 stages. In stage 1 the tool was field tested on foundation doctors with responsibility for writing discharge summaries. In stage 2 the tool was evaluated on final year students undertaking their secondary care assistantship. The students were invited to participate and receive feedback on the discharge summaries they wrote during their clinical placements. Once the feedback had been given utilising the DSF tool, participants will be invited to complete a questionnaire to evaluate the usability and acceptability of the written feedback given utilising the DSF tool.

Results:
Data collection for stage 2 is in process and full results will be presented at the conference.

Discussion:
Performing routine clerical duties, such as writing hospital discharge summaries, are vital for the handover of information and co-ordinating on-going patient care. Proficiency in writing hospital discharge summaries is a required foundation doctor skill. Errors in communication are a frequent source of patient safety incidents. Work based observation and feedback on discharge summaries written by assistantship medical students using the DSF tool may help improve the feedback and development of this vital skill.

References:
Evaluation of the use of escape room Games as a method of teaching human factors to medical students.
E Bartlett, H Pierce, R Kinston, S Kalidindi, L Brindley, C Cathcart
Keele University

Background:
The use of games as an educational tool has led to the development of the phrase “gamification” or “serious games”. Using games alongside classical teaching in health education has been progressing with emerging new research(1). Despite discussion into the potential negative impacts of gaming such as causing embarrassment and anxiety(2) the overall feeling in the current literature points towards gaming as beneficial to the students involved(1,3,4). Reviews by Bochennek et al(3), Graafland et al(1) and Blakely et al(4) into the use of games in health education demonstrated encouraging results, however they admit that there is a lack of available research to make conclusions as to whether it enhances the preparation of students for clinical practice(1,3,4).

Escape rooms are most commonly used in the recreational entertainment sector; they involve the solving of a series of puzzles using logic and teamwork in order to escape from a locked room(5). The use of serious escape rooms in education is increasing, however research into the area is minimal. One study demonstrated a positive learning outcome of using escape rooms in the teaching of physics(6). Another study by Borrego et al(7) showed computer science students to have an improved motivation for learning(7). Research within health education is even more limited with two papers demonstrating positive results in the teaching of clinical related topics to both nursing and pharmacy students using the methodology of escape rooms(8,9).

Secondary to the evolving field of serious games and the positive results from papers on escape rooms we developed two escape rooms for 5th students at Keele University. Our initial learning outcomes for the two pilot sessions were largely clinical. Debriefs from the sessions identified that learning was not purely isolated to clinical topics; students were also identifying their performance in human factors such as communication, team working and leadership. Following the identification of these common themes there is a need to evaluate and collect evidence that would substantiate our claims that escape rooms can be used in the teaching of human factors to medical students.

Papers into the use of escape rooms in medical education discuss the benefit in the teaching of clinical topics(8,9). There is, however, no research that we can find as to whether escape rooms can teach medical students about human factors. The importance of human factors in reducing error in medicine is widely recognised, and therefore exploring the use of escape rooms as a teaching methodology could have benefits(10).

Methodology:
This is a qualitative study, looking at themes from the videoing of escape room debrief sessions to identify common learning outcomes.

Two escape rooms with an underpinning clinical theme have been developed. Groups of 5th year medicine students at Keele University will undergo the first session and have a structured debrief. These will be filmed and reviewed by 3 independent researchers to identify common themes volunteered by students with regards to human factors that occurred. Evaluation of enjoyment of the escape room will also take place.

Each group will then undergo a second escape room session to see if themes changed and whether, following the first session, they considered what was discussed in the first debrief.

Results:
Results and quotes from evaluating the video independently will be analysed to identify if human factors are being identified by the students as post-game learning outcomes.

Discussion:
The aim from this study is that the students identify human factors amongst their learning outcomes from the sessions. It is hypothesised that this will show medical themed escape rooms as a useful methodology to teach human factors to medical students. From this there will be discussions regarding the implications for this in the medical curriculum and further potential uses in other sectors of health education.
References:
10. Glavin RJ, Maran NJ. Integrating human factors into the medical curriculum. Medical Education. 2003;37(s1):59-64

Ref: 274, Board: P7
Exploring third year undergraduate medical students’ perceptions of the appropriateness and utility of including therapeutic yoga and mindfulness within the undergraduate curriculum at Imperial College

E Gunning, H Wilson, J Horsburgh, S Powell, S Kumar
Imperial College London

Background:
Within today’s medical profession, ‘burnout’ is all too familiar. Unprecedented numbers are leaving the profession, while those who remain battle with higher rates of stress, anxiety and depression than the general population (1,2). These afflictions are increasingly prevalent amongst medical students (3), however self-care techniques such as mindfulness and yoga are not yet commonplace within undergraduate curricula. As medical educators we must equip our students with techniques to recognise and rectify these issues sooner.
The clinical benefits of mindfulness is well established (4) and research into yoga is also gaining momentum (5), yet their promotion as methods of self-care for medical students is limited. Numerous, albeit small, studies suggest that educating medical students about mindfulness has the potential to combat burnout through “reducing negative emotions and stress, as well as enhancing mindfulness, empathy and self-compassion.” (6, p269). In addition, a natural extension is ‘mindful clinical practice’, which may result in enhanced professionalism (7,8) and a sound grounding for clinical reasoning (9). Similarly, yoga may reduce medical student anxiety and improve academic performance (10–12).
Increasing students’ awareness of these therapies could be valuable both personally, to improve resilience and combat burnout, and professionally, as options for patients and to foster mindful clinical practice. This study aims to explore the students’ perceptions of the appropriateness of including yoga and mindfulness within the undergraduate curriculum, and whether they perceive this to have personal or professional utility.

Methodology:
At Imperial College, London, half of all Year three students undertake a 10-week Medicine in the Community attachment, which includes a student-selected module. ‘The science of yoga and mindfulness’ module takes eight students, three times per academic year. During this module students undertake mindfulness practices at home in addition to face-to-face teaching, and reflect on these experiences within a private WhatsApp group. A voluntary student focus group is held after each module to explore the research questions. An inductive approach to questioning is employed, developed according to the narrative and themes which developed within the WhatsApp group during the module.

Results:
The WhatsApp group thread and focus group transcripts will be analysed qualitatively, using open and axial coding. The key themes from the focus groups and WhatsApp groups will be presented at the conference.
Initial findings suggest that students value learning about these therapies, with several continuing regular practices. Mindfulness particularly was viewed as useful for the students personally in order to recognise, and reduce, their own stress levels. Both were regarded as valuable to recommend to patients; however most students had not previously considered how these practices could also improve their own clinical reasoning or interactions with patients. Barriers to students undertaking the practices were revealed, include feeling self-conscious and time limitations.

Discussion:
The findings will shed light upon whether students perceive it appropriate and useful to learn about mindfulness and yoga for personal and professional use while at medical school.
Introducing concepts such as ‘mindful clinical practice’ at this early stage may allow students to reflect on their own emerging practice as it develops during medical school, potentially leading to a more insightful doctor at qualification.
It is important to consider that our students likely selected this module due to a pre-existing interest in yoga or mindfulness. Both interventions require practice, and it is unlikely they would be universally enjoyed or employed for self-care by all. However, equipping students with a range of self-care options at medical school will allow them to draw on those they find personally effective during their emerging careers.

References:

Ref: 366, Board: P8
Eyes wide open: Does prior knowledge of the scenario alter the students’ learning outcomes in simulation-based teaching?
K Warren, S Williams, K Jones
Swindon Academy, University of Bristol

Background:
Simulation-based teaching is widely used within undergraduate medical programmes. Through the provision of realistic clinical scenarios in a safe environment, students can learn and make mistakes without compromising patient care (1). In the context of Miller’s Pyramid, students should be operating at the “shows” level, demonstrating their learning in the practical sense rather than simply knowing facts (2). Simulation-based teaching has also been recognised as a tool for teaching the importance of non-technical skills such as: communication, leadership, teamwork and stress management (3). This is particularly significant as adverse healthcare outcomes are often linked to a deficiency in one or more of these areas (3). In our experience of debrief, however, junior medical students often have a tendency to focus on their lack of clinical knowledge and therefore practical and non-technical skills are often overlooked. We aim to ascertain whether providing students with the topic of simulation scenarios in advance can alter their individual learning outcomes and lead to the debrief discussion being extended beyond clinical knowledge.

Methodology:
Third year medical students based at Swindon Academy will be the focus of this work. Those undertaking their Junior Medicine and Surgery (JMS) block will be provided with the topic of their simulation scenarios in advance and will be advised to read around the subject prior to attending the session. Those undertaking their Pathology and Ethics (P&E) or Musculoskeletal Diseases, Emergency Medicine and Opthalmology (MDEMO) block will continue to receive their simulation sessions as normal and will not be provided with the scenario topics in advance. At the end of each simulation session, all students will be asked to write down anonymously three individual learning outcomes from that session which they feel will be of benefit to them in their future practice. The students’ learning outcomes will be analysed by the study team and classified into “knowledge”, “practical skill” or “non-technical skill”. The frequency of each type of learning outcome will be compared across the two study groups. At the end of the study period, students will be asked to reflect on the benefits, or drawbacks, of receiving simulation topics in advance. Ethical approval has been granted by the University of Bristol.

Results:
Formal results are awaited. Descriptive statistics will be presented along with results from thematic analysis of student reflections.

Discussion:
The reported benefits of simulation-based teaching are many, and students should be encouraged to work to the higher levels of Miller’s Pyramid in order to advance their clinical competence. We hope to demonstrate, through providing students with their simulation scenarios in advance, a shift in the focus of their individual learning outcomes, away from clinical knowledge and toward an appreciation of practical and non-technical skills.

References:
Facilitating real-time decision making using toxicology simulation
A King, D McCluskey, S Mullins, T Slade, K Jones
Swindon Academy, Great Western Hospital

Background:
In 2016 there were 3744 poisoning deaths in the UK alone relating to both legal and illegal drugs; a peak since records began and an increase of 2% since 2015 (1). Medical students are expected to gain skills and knowledge during undergraduate education to reliably assess and treat poisoned patients (2). Time-critical clinical presentations such as opiate overdose (which account for 54% of drug-related deaths [1]) can occur in any setting; both community and inpatient, and rapid diagnosis can minimise further patient harm. Delivering teaching of current clinical practices and guidelines to undergraduate students is vital and recent introduction of intranasal Naloxone to the Great Western Hospital, Swindon provided the impetus for the study. Preparing students to become clinical decision makers is vital for progression into Foundation training but evidence shows that they lack effective decision making strategies (3) therefore a pilot study was undertaken using opiate overdose via simulation as the case example, to deliver a decision-making strategy teaching session to third year medical students.

Methodology:
Third year medical students studying at Swindon Academy will participate in a dedicated focus group to elicit current thoughts about general prepared-ness for clinical decision making, knowledge of methods/tools and barriers to clinical decision making. Questions are framed around simulation sessions in addition to real clinical experience. Select students studying emergency medicine will partake in a teaching session introducing the ‘AM I HERO NOW’ (3) decision making tool and following toxicology simulation teaching will self-evaluate their decision making skills by method of questionnaire identifying strengths and weaknesses in performance, confidence and anxiety. They will also complete a reflective log both after the session and after a four week hiatus but after watching their videotaped toxicology simulation. A second intake of students will undergo the same programme from March 2018.

Results:
Results will be available after the completion of the pilot programme in February 2018. Statistical analysis of the student’s self-assessment and confidence scores will be undertaken upon completion of the programmes, and applied thematic analysis will be used to evaluate both the focus group feedback and the reflective writing.

Discussion:
We anticipate that this pilot programme could provide the basis of a structured integrated clinical decision making course that could be valuably incorporated into the curriculum. Full conclusions will be drawn from the completed and analysed data.

References:

Ref: 207, Board: P10
Fatal attraction? Introducing a new Forensic Medicine SSC
A King, K Jones
Swindon Academy, Great Western Hospital

Background:
Student selected components (SSCs) form an exciting and integral part of the University of Bristol’s medical curriculum. They provide students with experience in a wide range of specialties within different settings with the opportunity to choose areas they are interested in studying which adheres to GMC standards for medical education (1). SSCs have proved very popular with students at Swindon Academy, in particular citing ‘interest in clinical area’ and ‘future career’ as the top two reasons for selecting their SSC choice (2). A new SSC is being introduced for 2018 entitled Forensic Medicine with a total of five places available for students, where it will further expand upon the wide variety of SSCs currently available. It is a niche area of medicine but “has much to contribute to undergraduate medical education” (3) so this SSC offers students a rare chance to explore aspects around death and the process of dying including clinical forensic medicine, forensic pathology and medical law. In-depth theory behind this SSC design (3) has been implemented to prepare an extensive programme of interactive learning experiences. Interest in the SSC has been disproportionately high in relation to the number of places available; this study aims to find out why and compare the findings to broader SSC patterns of behaviours at the University of Bristol.

Methodology:
Students who both expressed an interest in and applied for the Forensic Medicine SSC will be surveyed via online questionnaire. The results of the questionnaire will be compared to those gathered in previous year groups (2) and to the rest of their SSC cohort (third and fourth year medical students) who will be targeted with a similar questionnaire. Students who then undertake the SSC will be invited to take part in a focus group or reflective practice to discuss the role of the SSC within their personal medical curriculum.

Results:
Results are pending due to the outstanding SSC application process. Statistical analysis of the questionnaires will be conducted in addition to applied thematic analysis of the qualitative data gained via multiple methods (white space questionnaire answers, reflective practice and focus group discussion).

Discussion:
Initial interest in the new SSC has been extremely high, more than originally anticipated, and it has already been suggested expansion for 2019 is likely based on the success of 2018’s student cohort. Full conclusion remarks will be made upon results analysis.

References:

Ref: 245, Board:Q1
From the couch to the simulation suite: Introducing a psychiatry simulation programme for medical students
H Greenstone, R Holman, J Patterson, K Wooding
Severn Postgraduate Deanery - Core Psychiatry Training

Background:
Simulation is an exciting and rapidly growing area of medical education, fast becoming part of all undergraduate medical student curricula. Simulation has been shown to not only improve history, examination and diagnostic skills, but also non-technical skills such as teamwork and communication. These skills are essential in psychiatry, yet the use of simulation is far less established in psychiatric training compared to acute medical or surgical specialties. That said, there is evidence to suggest simulation is increasingly being used in both undergraduate and postgraduate psychiatry teaching. Evidence has shown that it is an effective and popular way of teaching and this method is rooted in social constructivism and experiential learning theory.

Methodology:
A simulation programme was devised for undergraduate University of Bristol students on their psychiatry placements at Bath. Three simulation scenarios covering different areas of psychiatry, with a focus on psychiatric emergencies, were developed. A pilot session was run for four students and feedback was obtained prior to the scenarios being rolled out for all students. The high-fidelity simulations were run in a dedicated simulation suite by core psychiatry trainees and a consultant psychiatrist. A mixture of live actors and high-fidelity mannequins were used. Each student had the chance to both participate and observe via a live video link. Feedback was obtained via pre and post session questionnaires using confidence scores and Likert scales as well as free text boxes.

Results:
18 students will participate in the simulation sessions between August 2017 and June 2018. Data has already been collected on eight students (four student from the pilot session and four students from the first run). Once all the data has been collected, paired T-test will be used to further analyse the data set. Our preliminary results from the first eight students are encouraging. Gathering data from written feedback forms showed that students’ confidence increased after the simulations sessions, in terms of their perceived ability to both recognise and manage acute psychiatric emergencies. The students were asked to rate their confidence on a scale of 1 – 10, from ‘not at all confident’ to ‘very confident’. In recognising psychiatric emergencies, students’ self-rated confidence increased from an average of 3.5/10 to 6.2/10. In management of psychiatric emergencies, students’ self-rated confidence also increased from 3.5/10 to 6.2/10. Free text feedback comments also indicated that the students found the simulation scenarios realistic and relevant to their future clinical practice. Student feedback also indicated that the post session debriefs were informative and helpful.

Discussion:
The results demonstrate that this novel approach to teaching psychiatric emergencies through simulation improved students’ confidence in recognising and managing acute psychiatric emergencies. These results indicate that more emphasis on simulation teaching may help students feel more competent in applying psychiatric knowledge to clinical situations. Simulation teaching using psychiatric history taking and management skills, in a simulated acute/emergency department setting may also help integration of knowledge across specialties. We hope to develop this project into a wider simulation programme involving postgraduate medics, as well as nurses and therapists within the MDT. Teaching students about psychiatric emergencies may also increase medical student interest in psychiatry as a speciality and may challenge students’ existing perceptions about the role of the psychiatrist.

References:
GERT lush: improving empathy in first year medical students
P Rusby, H Emery, S Stuart, T Subramanian, S Sansom
South Bristol Academy

Background:
Doctors can easily lose sight of the fact that there is a human being at the centre of the disease they are trying to treat and that the study of medicine requires holistic care of that person (1). It is important that doctors are not only clinically sound but also care and empathise with their patients. As medical educators it is essential we include this training in a medical student’s curriculum.
The Gerontology Test (GERT) suit is used to simulate ageing and disability with studies showing it can improve student empathy towards patients (2, 3). The aim of this study was to combine the GERT suit with an expert patient encounter. We postulated that the first-hand experience of the GERT suit combined with the interaction with a patient suffering from a chronic condition, would improve student empathy even further as the two experiences should enhance each other.

Methodology:
First year medical students attended sessions using the GERT suit where they tried on the suit and visual impairment glasses and attempted to carry out simple everyday tasks such as opening a dossette box. They then attended a session with an expert patient having been briefed that the aim of the session was to find out how the condition affected everyday life.
Following the sessions the students completed a feedback form to ascertain whether they found the sessions useful and whether combining the sessions was beneficial.

Results:
56 of 61 students in attendance completed the post-session questionnaire (91% response rate). The sessions were well received with 89% (n=50) and 77% (n=43) of students strongly agreeing that the expert patient and GERT suit sessions, respectively, were useful. Interestingly, only 71% (n=40) of the respondents strongly agreed that the GERT suits could help them understand what it is like to live with a disability. Some of the qualitative comments collected from the students suggested this may be because the students had a deeper understanding of what disability means: “I think having a disability includes more than some weights”. Other students commented on the benefit of having an expert patient session alongside the GERT suit simulation with comments such as making them “more aware of the human behind the condition” and that it allowed them to “put themselves into the patient’s shoes and experience their disability”. 12 students mentioned the word “empathy” in their feedback and cited an increase following the expert patient and GERT suit sessions.

Discussion:
These results provide evidence of the benefits of combining a disability simulation suit with an expert patient in the setting of musculoskeletal disease. Qualitative data collected from the students suggests that meeting a patient with a musculoskeletal condition helped them to understand the person behind the disability and helped to increase their empathy. This is a pilot study which we are aiming to expand in future sessions to gain a greater insight into whether the combined GERT suits and expert patient sessions can change the students’ perception of disability.

References:

Ref: 356, Board: Q3
Global Health Student Selected Components: A qualitative case study using feedback and reflective writings
H Bothwell, L Evans, K Jones
Swindon Academy, University of Bristol

Background:
The University of Bristol provides all medical students the opportunity to undertake student selected components (SSCs) at multiple stages of the undergraduate programme. SSCs enable students to explore areas of interest that are not covered by the curriculum. Since 2013 Swindon Academy, based at the Great Western Hospital, has offered medical students in their fourth year of study a global health SSC which includes a two week trip to a hospital in rural Uganda. “Tomorrow’s Doctors” highlights the importance of understanding healthcare from a “global perspective” and student feedback from previous SSCs suggests that self-assessed knowledge of global health increases as a result of this SSC (1) (2). The focus of this SSC is the planning and implementation of a small audit or research project in Uganda and students are assessed through submission of a project write-up including a reflection.

Reflection has developed from experiential learning theory and is recognised as an essential part of good medical practice and continuing professional development (3). Reflection is now a key aspect of many postgraduate training programmes, however, although there is evidence to suggest that this can increase trainee engagement with reflection, the quality of the reflections is variable (4)(5). There is increasing use of reflective writings in undergraduate curricula to help students prepare for reflection in their postgraduate clinical practice but evidence is lacking as to whether these can be used to successfully assess learning outcomes.

Methodology:
20 students completed this SSC in 2017 and an anonymous online questionnaire was completed by 80% of participants. This questionnaire collected both quantitative (using Likert scales) and qualitative (using open questions) data exploring students’ satisfaction and experience of the SSC including the level of academic, project and spiritual support provided as well as perceived challenges in completing the project and barriers to healthcare delivery in the low resource setting. All students successfully submitted written assignments including reflections which will be analysed using discourse analysis.

Results:
Student feedback was positive with all respondents rating the overall experience as “good” or “excellent.” Students reported increased confidence in their knowledge of global health, diagnosis of tropical diseases and management of tropical diseases after completing this SSC. Feedback also highlighted that students found conducting research a challenging experience with students rating the difficulty as 3 out of 5.

Discourse analysis of students’ reflection is ongoing but suggests that students gain far more than improved knowledge of tropical diseases. Students reflect positively on having the opportunity to lead their own research project (often for the first time) in a low resource setting and feel that by completing these projects they will be “useful” to the hospital. Several students reflect the stark contrast to healthcare delivery in the UK and recognise the "privilege" of having a healthcare system that is free at the point of access. Some students noted the different approaches that clinicians in Uganda had to training in "taking ownership" of their own learning.

Discussion:
Students completing this SSC report increased knowledge of global health and tropical medicine as well as rating the experience positively. However, their reflections reveal much broader learning outcomes and demonstrate considerable insight into multiple topics including conducting research in the low resource setting, the difficulties of implementing a change in practice and training and healthcare inequality.

References:
Helping early years medical students make the transition to the acute clinical setting: applying scientific knowledge and coping with the change in learning environment

H Wilson, E Muir, M Farooqi, A Harding
Imperial

Background:
For over twenty years students at Imperial College, London have begun interviewing patients with stable chronic diseases in their own homes within weeks of starting the MBBS course. However, this experience is no longer enabling students to make the transition to today’s acute NHS hospital setting in terms of coping with its busyness and with patients who are often very ill. As trainees, we have experienced these challenges personally and also the disconnect between what is taught and what is practiced in the workplace. This project offered an opportunity to learn the skills required to establish curricula changes through developing new learning sessions designed to explore:
1) how experiential learning in the standardised setting of the Clinical skills ward facility improves students’ confidence and professional preparedness for gathering histories and making basic clinical observations with acutely ill patients; 2) how students apply their science-based learning to clinical tasks and students’ understanding of touch in the clinical setting.

Methodology:
Two sessions were designed using case scenarios that included scientific content from Year 2 lecture and anatomy sessions. Actors were involved in developing their roles as patients who were initially well enough to have their history taken but then became acutely ill. Faculty and senior students played the roles of nurse and doctor. Students were debriefed and offered feedback after each role play which was then repeated with some changes to the scenario. A discussion about touch and teaching linked to scientific and anatomical aspects of clinical observations were included. 48 student volunteers were recruited and attended each session in groups of up to 12. Anonymised confidence rating questionnaires, with a five point Likert scale about taking histories, were completed before and after each session and focus groups held on separate occasions. The authors kept field notes of experiences and interactions between the students during the sessions. Transcripts were analysed for themes by the authors independently, using a phenomenological approach.

Results:
Students described their concerns about the forthcoming clinical attachment as ‘not knowing what to do’; ‘being in the way’ and their emotions as 'anxious’ or 'excited'. The confidence ratings for all seven measures of confidence about talking to patients increased and the increases were most marked for confidence in talking to or taking a history from acutely ill patients. Comments written after the session were, for example: ‘I feel more confident about talking to an acutely unwell patient in particular because I now know who can help me and what I’m expected to do’. The content of the session was modified after initial feedback as some students found it too challenging to cope with a situation in which the ‘patient’ became significantly more unwell whilst they were taking a history. After completion of all the sessions, the questionnaires and transcripts were analysed qualitatively and the key themes and the trainee’s perspective of the project will be presented at the conference.

Discussion:
Our pilot reflects that students appreciate the opportunity to be involved in a simulation of working with acutely ill patients early in their training. Practising in a safe clinical setting in the early years allows students to reduce their apprehension of the possible experiences they may have. Trainees who have recently come through medical school are well placed to develop teaching content that addresses the learning needs of medical students to prepare them for their first years of ward work in the hospital. However, trainees need guidance by senior faculty to navigate the formal process of such educational development work as it is unexpectedly complex.

References:

Ref: 387, Board:Q5
Hot Off The Press: Novelty Teaching Newspaper Found to be Useful Educational Resource!
L Hemmer, M Nazar, M Freeman, R Oliver, B Hammond, N McNiven
Newcastle University

Background:
The use of humour and fun in education can be beneficial to learners and teachers. Beyond making “dry” subjects more appealing, it creates a positive learning environment, encourages student interaction and participation and hence facilitates active learning[1-3]. This project stemmed from the observation that, following a week of teaching during the Foundations of Clinical Practice (FoCP) placement, third year medical students often suffered from what we termed Friday Fatigue. Similar to Lecturalgia, “a state of...agitation, frustration, and anger...or apathy and somnolence”[4], it led to poor engagement in Friday afternoon teaching and subsequent requests for revision sessions on the topics covered. We aimed to combat this by doing a weekly review, rather than cover new material, using games and a novel teaching resource, The TF Times.

Methodology:
The TF Times is a humorous teaching resource designed by Teaching Fellows at the Cumberland Infirmary. It is formatted as a traditional newspaper and each issue is themed around a “system” (cardiology, respiratory etc.) featuring headline articles on core conditions, fictional cases and tasks for students to complete. Between September and November 2016 and 2017, The TF Times was distributed weekly to two cohorts of 20 third year medical students. They were expected to work through the tasks, including Crack The Case and ECG and X-Ray of the Week, and be prepared to discuss their answers in the Friday afternoon teaching, which was structured around The TF Times. The Teaching Fellows facilitated group discussions before completing the session with a game, an entertaining and interactive approach to clinical reasoning often utilising television gameshow formats. The 2016 cohort completed short pre- and post-tests based on the ENT TF Times. The pre-test was taken at the start of the week, prior to the distribution of the newspaper, and repeated at the end and the pre- and post-test were scores compared. An additional yes/no question was added to the post-test to ask if students had read The TF Times that week. The students also completed feedback questionnaires after weeks 3&9 of FoCP, including a 1-5 Likert Scale (1=Totally Disagree and 5=Totally Agree) for 12 questions about specific aspects of The TF Times and Friday afternoon teaching, and 3 free-text boxes for “Good Points”, “Bad Points” and “Suggestions for Improvement”. Data collection from the 2017 cohort is in progress.

Results:
Pre and Post Test
All 20 of the 2016 cohort completed the pre- and post-tests. The mean pre-test score was 10/22 (45%) and the mean post-test score was 15/22 (68%), p=0.01. The percentage score increase was much greater for students who had read the newspaper (n=11) compared to those who had not (n=6), 32% increase and 8% increase respectively. 3 students did not state whether they had read the newspaper.
Feedback Questionnaire
18 students of the 2016 cohort completed both questionnaires (36 total responses). Of those responses, 100% agreed/totally agreed that The TF Times was a useful resource, 92% agreed/strongly agreed that the puzzles were a good learning tool and 83% agreed/strongly agreed that the newspaper helped focus their self-directed learning. Comments from the free-text sections included: The TF Times is “funny and informative” and “a great revision tool as it has a lot of information in a concise and easy to read manner.” Regarding the teaching overall, 97% agreed/strongly agreed that the teaching helped them achieve FoCP outcomes and agreed/strongly agreed that the teaching was enjoyable.

Discussion:
Creating a humorous educational newspaper as a unique and memorable teaching resource was well received by a small group of third year medical students. It facilitated student engagement in group teaching and guided students’ self-directed study. Our empirical testing suggests it is a useful educational resource which aids learning, however more data is needed to assess it’s impact on retention of knowledge over time.

References:

Ref: 121, Board: Q6
How do medical students feel about clinical uncertainty in a simulated environment?
A Scott, J Fisher, M Sudlow
Northumbria Healthcare NHS Foundation Trust

Background:
The benefit of simulation in enhancing the acquisition of technical, clinical and inter-professional skills is well established[1,2,3]. Clinical scenarios within simulation teaching are often simplified to highlight specific learning outcomes, however, it has been theorised that this could be detrimental to long-term professional development[4]. Foundation doctors often report feeling inadequately prepared to cope with uncertainty[5]. Simplified simulation scenarios may contribute to this by creating unrealistic expectations of clinical certainty in patient management, which are not reflected in the complexities of ‘real life’ medicine.

In this project, we deliberately increased the complexity of simulation scenarios within the existing curriculum in order to emulate situations that replicate clinical uncertainty. The aim of this study was to assess students’ perceptions of heightened complexity and uncertainty in order to refine future simulation scenario development.

Methodology:
This study recruited final year medical students at Newcastle University. Ethical approval was obtained before commencing the work.

For this project, a single scenario in one simulation session was adapted, with added clinical complexity. Steps taken to increase uncertainty included: the patient having less acutely deranged physiology; vague symptoms with an unclear diagnosis; a requirement for students to read a simulated patient’s notes; and a need to liaise with senior staff.

Undergraduates and staff were briefed prior to the sessions on the intended learning outcomes. They were informed that a station had been changed to assess students’ perceptions of its benefit as a teaching aide. All students were formally consented. Students led one simulation each whilst other students observed. Across the simulation sessions, six students took part in the adapted scenario, with thirty taking part in the original scenarios. Students were asked questions about how they perceive clinical uncertainty at the beginning of each simulation session. Examples include: ‘How do you feel when you’re faced with a patient who has an uncertain diagnosis?’ and ‘What do you think when you see a doctor who is uncertain about patient management?’

Students responded via an online tool, which could be accessed via their smart phones. This generated anonymised word-clouds of their responses in real-time.

Following the amended scenario, students underwent a structured debrief, allowing them an opportunity to reflect on their experience and explore perceptions of uncertainty with staff and peers. These were audio-recorded and transcribed. Initial word-clouds were used to inform the debriefs. The process continued iteratively, with word cloud data and debrief findings informing subsequent debrief questions. Coding structures were applied to the data and thematic analysis was undertaken.

Results:
The project is ongoing and full results will be presented when they are available. Final data collection will be completed on 18th April 2017.

Discussion:
It has been suggested that a ‘decontextualised approach to skills training’ within simulation may lead to unrealistic expectations of medical practice, due to oversimplification of what is often a complex reality[4]. Experiences of staff in our institution have indicated that students react less positively to simulations that include ‘adverse’ patient outcomes, such as those resulting in patient death. This may represent an example of such unrealistic expectations. Our aspiration is that the introduction of complexity and uncertainty to our simulation teaching will act as a stimulus to enable exploration of students’ perceptions of these concepts. The findings of this study will be used to refine existing simulation teaching in ways that will better prepare tomorrow’s F1 doctors for the uncertainties and complexities of 21st Century medicine and to create new scenarios more reflective of the reality of medical practice.

References:
Immersive on-call simulation for final year medical students improves non-technical skills required for medical on-call work

J Thompson, P Ross
North Manchester General Hospital, Pennine Acute Trust

Background:
Medical students typically receive little training during their studies to prepare them specifically for the out of hours on call ward work that can make up 30% of their time upon qualification. Newly qualified doctors are often expected to work relatively independently whilst on call, triage by telephone, prioritise heavy workloads, see complex patients, manage multiple acutely unwell patients simultaneously, document in a concise but contemporaneous fashion, escalate appropriately, and handover at the end of their shift. Working on call requires both clinical knowledge, and well developed 'non-technical skills' - communication, situational awareness, decision making, and team working.

We designed a 2.5 hour ward based simulation session to help students develop both the clinical knowledge, and the non-technical skills, required to successfully navigate on-call work. Scenarios were designed to closely mirror a typical medical ward on call - patient with reduced urine output, hospital acquired pneumonia, sepsis, fall in a confused patient, warfarin dosing, and fluid prescription.

Methodology:
24 Final year medical students from the University of Manchester placed at North Manchester General Hospital took part in 2.5 hour ward based simulation sessions where they were paged to see common on-call patients. Sessions were facilitated by Foundation Year doctors. Students were expected to triage and prioritise calls from nursing staff, undertake an assessment of the situation from documentation provided at each scenario (admission documentation, ward round entries, test results, drug charts, observation charts, current symptoms and signs), document and enact a plan for further investigation and management, escalate as appropriate, and handover patients during a semi-structured debrief based around national and international guidelines for the management of the conditions seen. Questionnaires were completed by students following the sessions to assess self reported improvement in non-technical skills and confidence in managing similar scenarios in future.

Results:
22 Students completed post simulation questionnaires. All students agreed or strongly agreed that the simulation session had improved their ability to take handovers by telephone, prioritise patients, and make contemporaneous medical notes. All students felt more prepared for undertaking medical on-calls following the session. Additionally, qualitative feedback identified practice working under pressure, the realistic nature of the simulation setup and scenarios, practice prescribing fluids and medications, and the development of an understanding of when to escalate patients, and who to, as further positive outcomes from the sessions. Facilitators noted that uncertainty over the identification of critically ill patients and appropriate escalation were areas of concern during simulation sessions, and these were highlighted to students during debriefing.

Discussion:
Immersive on call simulation sessions for final year medical students are an effective means of improving both the required clinical knowledge, and the non technical skills, required for on-call ward based work. Practical training in telephone triage, prioritisation, medical documentation, escalation pathways, and handover should be a mandatory part of the undergraduate medical curriculum.

Ref: 354, Board:Q8
Improving Undergraduate Medical Education: The Surgical Skills for Students Course
TSM Chu
Newcastle University, UK.

Background
The Royal College of Surgeons (RCSEng) and General Medical Council (GMC) have specified a set of surgery-specific outcomes for medical graduates\(^1\,^2\). They include outcomes such as skin suturing and the use of local anaesthetics. However, research have suggested that medical schools in the UK often provide minimal training in surgical and procedural skills\(^3\,^4\).

Objectives
To evaluate how a Surgical Skills for Students (SSS) course could improve the knowledge, competency and confidence of medical students in surgical skills.

Methods
A peer-assisted SSS course comprising of two workshops led by junior doctors and senior medical students were conducted. Three surgical Skills (suturing, knot tying, laparoscopy) and other procedural skills were covered. Questionnaires were sent to participants to record pre-course and post-course mean knowledge and confidence scores. The t-test (independent samples and paired samples) was used to compare the mean scores to establish statistical significance. A five-point Likert scale was used to capture additional feedback.

Results
23 students attended the course. Of the questionnaires received, only 26.8% of participants reported that they had formal teaching within the curriculum on the three surgical skills on average. Significant improvement in the mean self-reported confidence scores in suturing (+3.5, \(p<0.001\)), knot tying (+4.7, \(p<0.001\)), and laparoscopy (+4.3, \(p<0.001\)) were recorded. All participants reported an improved knowledge in suturing and laparoscopy, while all but one participants reported an improved knowledge in knot tying.

Conclusions
Undergraduate curricula do not provide sufficient surgical training. Peer-assisted courses, such as SSS, are sustainable and effective in enhancing knowledge and confidence in surgical skills amongst medical students. Introduction of such workshops should be considered by medical schools to improve medical education and equip students with essential skills as defined by the RCSEng and GMC.

References:

Ref: TEX3, Board: Q9
Improving undergraduate palliative care teaching – use of simulation to address an unmet need
L Jones, S Panter
South Tyneside Foundation Trust

Background:
50% of the UK population die in hospital (1). Of the medical team, foundation doctors have most patient contact (1) and need to be able to effectively manage end of life care. However, up to half of new UK doctors feel unprepared to deal with death and dying (2), receiving only 20 teaching hours aimed at these issues in UK undergraduates training (3).
Feedback on local palliative care teaching indicated room for improvement with little learning taking place. Evidence shows simulation improves medical knowledge, confidence in practice (4), engagement in learning (5) and is superior to traditional teaching methods (6).
Given these issues, a 3-day palliative care focused, low-fidelity simulation programme was designed and implemented to improve quality of undergraduate teaching in palliative care.

Methodology:
A 3-day educational simulation program was designed using guidance from ‘Standards of best practice: Simulation Standard IX: Simulation Design’ (7) aiming to further develop learners understanding of how, as a foundation doctor, they manage a patient at the end of their life.
Four patient case scenarios were designed that introduced end of life issues. The scenarios required learners to assess the patient, order appropriate investigations and initiate treatment. Learners were required to manage medication including anticipatory medication and find appropriate alternatives for critical medication. Actors were utilised as the patient’s relatives as the learners broke bad news, discussed end of life care and advanced care planning. Learners were encouraged to adapt care based on religious and cultural views as well as a changing condition. Mannequins enable Learners to confirm death, discuss with seniors and fill in paperwork.
Feedback was planned throughout and it was completed with a debrief session, didactic teaching and Q&A session on how to deal with death and dying as a junior doctor.
Questionnaire based evaluation was undertaken before and after the teaching. Qualitative data methodology investigated words associated with palliative care, awareness of advanced care planning and confidence in managing issues associated with death and dying. Evaluation of the teaching methods and their impact was undertaken.
Quantitative data looked at confidence on a scale of 1-10 in 8 domains:
• Recognition of a patient approaching end of life
• Prescribing anticipatory medication
• Altering anticipatory medication with a changing clinical situation
• Stopping regular medications
• Discussing death with peers
• DNACPR (Do Not Attempt Cardio Pulmonary Resuscitation) discussions
• EHCP (Emergency Health Care Plan) discussions
• Breaking bad news

Results:
14 final year UK medical students participated in the teaching. All had previously experienced palliative care teaching, covering all 8 domains except EHCP’s. 12 completed the pre-survey and 13 completed the post survey.
Conclusions from the qualitative questionnaire:
• Palliative care teaching was important
• The teaching was useful and necessary
• Palliative care can be difficult for a junior doctor
• Role play was beneficial to learning
• Learners enjoyed the experience
Before the teaching 0% knew what an EHCP was, how to use it or how to confirm death, after this increased to 100% for both. There was an increase from 31% to 100% in confidence of having a framework to break bad news. Confidence increased after teaching, from a mean score of 5.21 (SD=1.63) to 7.36 (SD=0.45) across the 8 domains tested. p=0.005, as determined by a paired T-test, N=8.
Discussion:
The results are reassuring, although based on a relatively small cohort. Learners enjoyed the teaching, with confidence levels in managing common palliative care situations increasing. Going forward the simulation will be delivered to further groups of learners and the program adapted based on feedback to allow improvement in delivery of the simulation.
It is hoped the learners will retain the knowledge and skills so they are better equipped as Foundation doctors.

References:

Ref: 135, Board: Q10
Inside the 'black box' - interactive practice in clinical reasoning for 2. year students
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Centre for Academic Primary Care, Bristol Medical School, University of Bristol

Background:
The university of Bristol medical school has traditionally followed a conventional early years science course with some systems based clinical teaching prior to full clinical contact. To provide students with opportunities to link their science and clinical learning and to practice clinical reasoning we created a series of large group interactive learning sessions.
The literature describes two approaches for teaching clinical reasoning, the serial-cue method and whole case format. The serial-cue method reveals data to the students gradually, whilst the whole-case format presents students with all the data in one go. Our sessions follow the serial-cue method.
In the lead-up to the launch of an innovative undergraduate curriculum we took the opportunity to evaluate our delivery of integrated lectures and explicit teaching of clinical reasoning.
The purpose of this paper is to explain the development of integrated clinical lectures which unite anatomy, physiology and clinical sciences as a method for explicitly teaching clinical reasoning. We present students perceptions of the serial-cue method and findings from its application.

Methodology:
These integrated interactive learning sessions have been running for 3 years. They have a central patient, pop up patients with similar symptoms and different diagnoses and pop up revision of relevant physiology and anatomy. Data for our main patient is gradually revealed over the course of the session. In doing this we aim to replicate what we do in clinical practice, where additional information contributes to fashioning a differential diagnosis. Students vote on diagnoses repeatedly which allows explicit discussion around clinical reasoning and diagnostic thinking as the students build an increasingly dense set of data. To aid this process the students are presented with a clear 5 step process that requires the application of key findings to ‘frameworks’ which they have learned in their science lectures.
The data we have collected are the students’ voting patterns and represent evaluation at Kirkpatrick level 1 and 2.3. They show how students adjust their diagnosis in response to increasingly detailed patient data and the students’ perception of the session.

Results:
Results from four integrated lectures in 2017-18 will be presented. They suggest that second year students can take account of new information presented and adjust their differential diagnosis appropriately. The majority of students felt that they had gained a better understanding of the clinical reasoning process.

Discussion:
The serial cue method has high face validity as it simulates real encounters, but concerns have been raised that it could possibly hinder learning. The explanation offered for this opinion lies with cognitive load theory. Every patient encounter helps to build up pictures of conditions and when faced with a new ‘history’ doctors draw on these ‘illness scripts’. Junior students have fewer illness scripts and therefore have a higher cognitive load when comparing key data within known ‘frameworks’. This is thought to make a high demand on working memory and there is concern that this could hinder learning.
Evidence for the effect on learning for either method is inconclusive. Our sessions seem to suggest that students can work with the serial-cue method in a large group learning session. We do not know how this learning translates into their clinical encounters with real patients. Further research would be helpful on comparing clinical reasoning teaching between serial-cue and whole-case formats.

References:
2Forest, Ed. Kirkpatrick model: four levels of learning at https://educationtechnology.net/kirkpatrick-model-four-levels-learning-evaluation/ accessed 10.1.18

Ref: 328, Board: Q11
Introducing Young People to Careers in Healthcare: An Innovative Approach
K Warren, J Hartland, L Whatley, C French, K Jones
Swindon Academy, University of Bristol

Background:
The National Health Service (NHS) is under increasing pressure to attract and retain staff, and to adapt to changes in the population it serves (1). Currently, the NHS workforce is not representative of the general population in England [2]. However, it has been suggested that a more diverse workforce would better meet the healthcare needs of our ever-changing society (1,3). The NHS Five Year Forward View prioritises the need for NHS Employers to widen recruitment to reflect local communities (1). Here, we aimed to raise local young peoples’ awareness of the many careers available to them within the NHS (4) and to support them in making decisions about their future.

Methodology:
Staff from the Great Western Hospital and the Oxford Brookes Nursing School collaborated to organise a “community simulation” event in July 2017 involving 30 local high school students, all in year 9. The morning saw the students observe a four-part simulation story which followed a patient through their hospital journey and introduced the students to the healthcare professionals involved in the patient’s care, including: paramedics, nurses, doctors and operating department practitioners (ODPs). The students were then given the opportunity to meet the healthcare professionals and ask questions, before taking part in an afternoon of hands-on activities. Student feedback was collected on the day.

Results:
29 students completed feedback on the event. Overall, the students rated the day 9.1 out of 10. Using a 10-point semantic differential scale, we asked students to state how useful they found learning about the various healthcare careers (1 = not at all useful, 10 = extremely useful). The mean responses for each career were as follows: paramedics (9.0), nurses (8.69), doctors (8.34), and ODPs (8.41). Students were asked to state how interested they were in pursuing a career in healthcare before and after the event (1 = not at all interested, 10 = extremely interested). The mean responses were 6.52 and 8.45, respectively. Students particularly enjoyed the practical aspects of the day and the opportunity to meet and question the healthcare professionals involved.

Discussion:
Our results demonstrate that an interactive simulation experience can be an enjoyable and informative way of opening young peoples’ eyes to the careers available to them within the NHS. Offering this experience to young people early on in their studies is preferable as it allows them to gain valuable insight into careers they may wish to pursue, prior to them selecting their GCSEs and planning further education. Longitudinal studies are needed to ascertain whether events such as this are associated with increased recruitment into the NHS from local communities. We will hold this event again in July 2018 and plan to invite a wider variety of representatives from the healthcare professions.

References:
Introduction of academic mentors and an e-portfolio to support students personal and academic development
D Kennedy, K McKeegan, J Moss, J Peterson, D Plummer
Newcastle University

Background:
Newcastle University has an intake of 343 medical students per year which creates difficulty in forming an effective working relationship between students and staff. Pastoral support is primarily offered via a University-wide personal tutoring scheme, which is supported by a Senior Tutor. A small number of core staff offer academic support when students are identified as being in need. The personal tutoring scheme has proved ineffective for a number of reasons including:
1. Tutors were drawn from a large pool of staff across the Faculty, many of whom have little involvement with the delivery of the MBBS programme.
2. Tutor meeting were deemed to have little focus or value by many students leading to poor uptake of meetings and no relationship being established.
3. Access to Tutors was problematic for many given the distance to where they were based, particularly for students in the clinical years of study.
Through our curriculum review process, we wanted all students have a personalised point of contact within the school who would not only support them pastorally, but also their personal and academic development. The academic mentor scheme that has been developed is akin to education supervision in Foundation and has been introduced from the Year 1 intake in September 2017. The scheme will roll out across all years as our refreshed course is implemented.

Methodology:
An academic mentor is an appropriately trained member of staff within the School of Medical Education who is the student’s first port of call for advice or direction to further support on academic and pastoral matters. Academic mentors listen to and support students in difficulty, monitor students’ engagement with learning and teaching, support students in their development of learning plans and provide guidance in relation to University and MBBS policies and procedures. To facilitate academic mentors in supporting their mentees we have developed an e-portfolio which provides both parties with a range of tools including:
1. Access to information held on the student record, including attendance
2. Access to assessment results and feedback
3. Access to clinical skills and mandatory training records
4. Ability to share reflections, learning plans and comment electronically
Academic mentors may direct students to relevant support within the school (e.g. Senior Pastoral Tutor), or to University wide institutional services and support such as the Careers Service or the Student Wellbeing Service. A schedule of meetings with purposeful agendas has been timetabled around key events including induction, assessment results, end of semester 1 and for an end of year appraisal. Each scheduled meeting is preceded by a mentor training session facilitated by the Senior Mentor and Senior Pastoral Tutor.

Results:
In Semester 1, all student have had at least 3 recorded meetings within their academic mentor. Mentors and mentees are engaging with the e-portfolio with 98.4% of mentors signing off students’ evidence of completed mandatory training by the end of Semester 1. Students have been using the reflective tools more than ever before with 2541 individual reflections being recorded in Semester 1 alone. Health, personal and academic issues are being identified early and students signposted to relevant support by their mentors. Results from the evaluation of introducing this scheme will also be presented.

Discussion:
The introduction of academic mentors and the supporting e-portfolio has enabled staff to engage in meaningful discussion to support students not only pastorally, but to also support their personal and academic development. Students and mentors are engaging with tools with the e-portfolio that demonstrate discussion around academic progress is taking place. Purposeful, regular and informed meetings between staff and students will help develop a professional personal relationship between staff and students despite the large cohort size. It will also help to identify and remediate any issues early.

Ref: 385, Board: R2
Leading the ward round: the F1 experience.
T Dowling, A Stanton, K Jones
Swindon Academy, University of Bristol

Background:
Most Foundation Year 1 (F1s) doctors participate in ward rounds as part of their medical and surgical placements. Ward rounds are an integral part of modern healthcare and have national guidelines surrounding their use (1-2). There is no mandated minimum level of doctor seniority that should lead the ward round however the Royal College of Physicians describes them as a ‘crucial part in... planning a patient’s care’ reinforcing the importance of these daily patient interactions (2). Anecdotally, many F1s are expected to see patients independently as part of a daily review or ward round interaction without senior doctors’ physically present. Searches through medical research databases demonstrate a lack of general research into this aspect of a first-year doctors’ working life and, may be, a consequently absent area in their university education.

Methodology:
We designed two surveys to look at the different expectations between junior doctors and consultants around independent daily reviews. We decided to also look at whether the junior doctors actually received any training on how to conduct a safe daily review as medical students. Two separate online surveys were circulated amongst the current junior doctors and consultants at the Great Western Hospital in Swindon. We obtained 46 responses from junior doctors and 28 consultant responses.

Results:
Our surveys are summarised below. 97.8% of junior doctors said they have conducted an independent ward round as an F1, with over 69% saying that this occurred once or more per week during their F1 year. Only 43.5% of junior doctors expected independent ward rounds to be part of an F1s duties before starting their rotations and only 15% said they had had any formal training on independent ward rounds at medical school with 84.8% thinking that it should be part of the medical school curriculum. 80.5% of surveyed junior doctors described their confidence at running an independent ward as between ‘Not at all confident’ and ‘Somewhat confident’. Conversely, 40.7% of consultants expected their F1s to see patients on independent ward rounds. Despite this over 70.4% of consultants felt that medical students should have formal teaching on how to run their own independent ward rounds.
As a result of these surveys we are organising an interactive teaching session for the third to fifth year medical students at Swindon Academy from the University of Bristol, aimed at improving their ability and confidence in running independent ward rounds.

Discussion:
Our surveys show that despite only 40% of consultants saying that they expect F1s to conduct daily reviews, the reality for F1s is dramatically different. Having identified this valuable teaching opportunity, widely supported by both junior doctors and consultants, with evidence that suggests medical students’ skills on patient reviews and documentation are insufficient for that expected of a junior doctor we aim to create a teaching session for medical students in their third to fifth year of study on running independent ward rounds and appropriate documentation (3). We will construct an interactive session to cover these topics and assess the students change in ability and confidence at the end of the session. Full results of the surveys and an evaluation of the teaching session will be presented at the ASME conference.

References:

Ref: 191, Board:R3
Learning to touch in clinical medicine: medical students’ views and experiences
S Patel, M Said Noor, E Muir
Imperial College London

Background:
Touch has a documented role in medical care. Although few studies have been published, it has been shown that touching patients provides comfort (1) and can reduce distress, particularly in neonates (2). The nursing literature has described teaching about touch (3) but a 1984 survey of medical schools (4) found that only 12 out of 169 provided any training in therapeutic touch, and only one provided a comprehensive and structured programme. Our aim was to determine what students at a single medical school perceive about touch before commencing hospital placements. Authors SP and MSN participated in the project during an educational study module for final year students.

Methodology:
We conducted four focus groups with 24 second year students after participation in a trial teaching session aimed at improving their preparedness for clinical training. Using an iterative method, the students were questioned about topics related to touch including defining touch; barriers to touch, and how it is taught and experienced. Transcripts from audio recordings were coded into themes by SP and MSN and reviewed by EHM. Themes were revised by SP and MSN and recurring comments identified (5).

Results:
Students defined touch at a level of physical contact as well as emotionally, with one participant saying “it has an emotional aspect to it. The comfort, the reassurance”. Participants mentioned their experiences with touch as patients, in simulated patient interviews and in anatomy teaching sessions. They commented on how touch developed their trust with each other and confidence with one participant commenting: “you know it’s for learning and stuff like that but also like trust on top of it”. Participants noted the differences between touch in an emergency vs elective setting and with changing levels of medical experience. Participants additionally commented on the cultural aspects of touch relating to religion and gender with one participant saying, “There are many traditional households, you’re not meant to shake hands with a woman...” as well as on the professional boundaries involved, with one participant commenting “but sometimes at medical school you’re almost taught to be a bit more reserved...”. Regarding their own confidence in touching patients, students’ thoughts varied; some commented that they would like more preparation to confidently initiate touch, with others commenting that it is not always possible to teach touch in a didactic setting, with experience a much better learning tool. Through participation in the project the authors (SP and MSN) found that their own placement experience changed with them both focussing more on how they were using touch with patients and reflecting on how their natural habits have arisen from medical and academic experiences.

Discussion:
This study characterised the range of opinions held by preclinical medical students on touch and the majority of these showed the need for more preparation and discussion, whilst also demonstrating their skills and experiences already. Students generally distinguished between clinical and social touch and commented on the communication benefits and the cultural and educational barriers to touch. Next steps include trialling the inclusion of discussions about touch in teaching with simulated and actual patients as well as reflective assignments for students on placements to assess their use of touch across the years of medical school.

References:

Ref: 227, Board:R4
Undergraduate Medical Education - Teaching & Learning

Medicine Calling: Evaluating a different approach to the recruitment crisis in psychiatry
R Winter, H Andrews
University of Leicester

Background:
Psychiatry recruitment is in crisis at a time when demand for psychiatric services is continually increasing. In particular, there is a failure to attract British graduates to the specialty, with only 4-5% of newly qualified doctors selecting psychiatry as their first preference.

The factors that affect recruitment to psychiatry are multiple, complex and not fully understood. It is known, however, that from their first year, medical students are exposed to destructive and disparaging criticism of psychiatry by other doctors, academic staff and from their peers. The development of a negative and stigmatised view of psychiatry and psychiatric patients is not uncommon in medical students or doctors. Knowledge amongst medical students about psychiatry as a profession is limited, and much of what is believed presents psychiatry as out-dated, inaccurate, unscientific and unrewarding.

Medicine Calling is a recruitment initiative for pre-medical school students that aims to provide a future generation of medics with a better understanding of the innovative, challenging and rewarding opportunities that a career in psychiatry offers. It encourages students to champion the profession to others throughout their medical careers.

Medicine Calling provides opportunities and experience for students from a non-traditional and widening participation background to help create a more diverse future medical workforce.

Methodology:
Medicine Calling held three events during 2016 and 2017. Both A level and GCSE students were targeted through targeted recruitment drives across the Midlands, and nationally through the use of social media and web advertising. Students from a state school background and those meeting widening participation criteria were specifically targeted and encouraged to attend. Programmes for each event were designed and developed to engage and inspire young people about psychiatry with a mixture of key-note lectures and interactive workshops.

Results:
Four hundred and fifty students from across the country have attended an event over the last year. Post event, 80% reported they would consider a future career in psychiatry; 99% felt more knowledgeable about psychiatry as a profession; and 99% felt able to champion it as a career to others. Similar results were found in a follow-up survey one month post each event.

Discussion:
The results from the first cohorts of students are promising. Medicine Calling has opened young peoples eyes to a career they had not previously considered. Through longitudinal follow up of students who have attended a Medicine Calling event, we hope to show a sustained interest and enthusiasm for psychiatry as a medical specialty. While we recognise there will be no single intervention to tackle the recruitment crisis facing psychiatry, we feel Medicine Calling is an important part of the solution, providing a different approach by focusing on a population previously overlooked. Psychiatry is not the only specialty facing a crisis in recruitment, with primary care, acute medicine and paediatrics also struggling. The Medicine Calling model may have utility for other specialties trying to attract and enthuse students to their profession. As recently highlighted by the Centre for Mental Health, a key priority for the future of the mental health workforce is the promotion of mental health careers in schools and colleges. Future visions for Medicine Calling include continued conference and careers events, outreach materials for psychiatrists across the country to use in their local schools and sixth form centres, and the development of a work experience programme for local students from less advantaged backgrounds.

References:
Multi-disciplinary Student Simulation: Is more participants better?
P Solanki
Princess Alexandra Hospital NHS Trust

Background:
The use of multi-disciplinary learning events in post-graduate education has been well established over the last few years (1). However, the same is not true for those in undergraduate education who get comparatively inadequate interaction with other groups of health professionals until qualification (2). Thus, we originally arranged a multi-disciplinary student high-fidelity simulation session involving third year medical students, final year nursing and final year physician associate students, aiming for one of each type of student in each scenario. The feedback from those sessions suggested that several of the students felt overwhelmed and thus we explored whether having more students within the simulations was advantageous.

Methodology:
A high fidelity simulation suite was used at Princess Alexandra Hospital NHS Trust, UK. During the initial sessions there were two afternoon sessions involving a maximum of 12 students per session. There were 4 scenarios per afternoon and three students in each scenario. The debriefing sessions were led by experienced de-briefers with a focus on the non-technical skills of team work and leadership. Feedback was obtained after each session. During the adapted session, there were four students in each scenario with 2 of them being medical students. The methods otherwise remained the same.

Results:
Students were asked to rate on a scale from 1 to 5 how strongly they agreed with the statements, with 5 being strongly agree. The scores are all mean averages.
In total we received 22 feedback forms from the initial sessions:
I enjoyed working with other disciplines       4.8
Having other types of students improved my understanding of my own and their roles. 4.8
This session improved my understanding of team-working in a multi-disciplinary way 4.7
Faculty were helpful, knowledgeable and good facilitators 4.6
I feel overall that simulations will help me become a Nurse/Physician Associate/Doctor 4.8

For the adapted session we received 9 feedback forms.
I enjoyed working with other disciplines:       5.0
Having other types of students improved my understanding of my own and their roles: 4.8
This session improved my understanding of team-working in a multi-disciplinary way: 4.8
Faculty were helpful, knowledgeable and good facilitators: 5.0
I feel overall that simulations will help me become a Nurse/Physician Associate/Doctor: 5.0

We carried out an unpaired T-test on the results, and although there was an improvement by 3.6% for I enjoyed working with other disciplines (p=0.1819); 7.7% for Faculty were helpful, knowledgeable and good facilitators (p=0.1550) and 4.6% for I feel overall that simulations will help me become a Nurse/Physician Associate/Doctor (p=0.2116), none of these results were statistically significant.
The comments were potentially more telling, with all the students within the adapted simulation session felt that there were the correct number of participants in each simulation, whereas some from the original sessions commented on feeling slightly overwhelmed.

Discussion:
After qualification, most health care professionals work in MDTs and it is peculiar that more emphasis is not placed on this during undergraduate education. Although it is not clear what the optimal number of students within a simulation is, multi-disciplinary student simulation sessions can nevertheless provide an enjoyable teaching session which enables students to have better understanding of the MDT team before qualification. Additional studies, with more participants, are required to explore optimal numbers and clinical impact.

References:
Paediatric Simulation: Assessing medical student confidence in simulated acute scenarios
A Macdonald, C Mathew, A Chew, J Hawley, A Brough
NHS Foundation Trust - The Newcastle upon Tyne Hospitals

Background:
Acute simulation is an increasing part of medical education both nationally and at Newcastle University. It is beneficial for improving team-working and communication as well as clinical performance and knowledge (1). Simulation training is also increasingly being used to improve patient safety (2).
University curriculums are also changing, with simulation increasingly being used for clinical teaching and as part of final assessments. However, it had previously not been a part of undergraduate Paediatric teaching at Newcastle University.
We implemented a new simulation session, to meet undergraduate learning outcomes of recognising, assessing and managing acute paediatric scenarios.
Research Question: Can simulation be used to improve undergraduate medical students’ confidence in recognising, assessing and managing common paediatric acute presentations?

Methodology:
Alongside the simulation team at the Great North Children’s Hospital we designed an acute simulation session which we delivered to final year medical students. The students reviewed ABCDE assessments and paediatric basic life support then undertook sim scenarios.
The students worked through acute scenarios in pairs, with cases mapped to the student curriculum to ensure relevance. After each scenario we debriefed using structured peer feedback, personal reflection and facilitator comments.
Students were asked to complete confidence scales pre- and post-session, rating their confidence relating to 10 curriculum corresponding skills. After the session a questionnaire was sent to the students to gather further comments and feedback.

Results:
73 students attended the sessions. We were able to analyse confidence scales from 72 students.
Of the domains assessed, we found confidence had improved in all areas. Prior to the simulation, 8% (n=6) deemed themselves confident or very confident at assessing an unwell child, after, this rose to 93% (n=67 p=0.0001) . Students also felt they had gained confidence in performing BLS with percentages rising from 12% (n=9) confident or very confident, to 95% (n=69 p=0.0001).
Other areas also showed improvement including leadership – from 4% (n=3) of students feeling confident to 68%(n=4 p = 0.0001).
Questionnaire data was also analysed. 42 students responded, giving a response rate of 57.5%. Of the students who responded, 83% of students strongly agreed that: ‘The session was useful for my stage of training’ and 95% of students strongly agreed it should remain part of the paediatric rotation.

Discussion:
From the data gathered we concluded that simulation sessions led to improved confidence in acute scenarios. Confidence improved markedly across a range of skills, both clinical assessments and broader skills such as leadership and communication. The questionnaire feedback supports this and verified students found these sessions engaging and would recommend implementing the session for future students.

References:
Peer group high-fidelity simulation debriefing for final year medical students
D Angel, A Foster, P Solanki
Princess Alexandra Hospital Harlow

Background:
The benefits of peer group (PG) teaching has been well documented in the literature (1). Several studies have demonstrated improvement in confidence, clinical skills and knowledge at similar scales to traditional tutor lead sessions for certain topics (2). From a faculty point of view, there are definite advantages of needing less faculty members and thus reduced costs. Although peer teaching is used occasionally in clinical skills teaching in medical schools, it is rarely, if ever used in simulation training. Thus, we developed a PG lead simulation debriefing program based on high-fidelity simulation aimed at final year medical students. It was felt that the experience and the thoughts of a current, same year, medical student could provide a unique insight to their peers.

Methodology:
The sessions were held at Princess Alexandra Hospital NHS Trust, a district general hospital in the United Kingdom. Throughout the academic year there are 4 groups of final year students with around 10 students per group. One of the final year medical students, who had previous attended the trust earlier in the year was developed as a peer debriefer. As this student had previously attended the same simulation sessions, he was able to provide feedback taking into account his previous experiences. The aim for the peer debriefer was to provide feedback on the non-technical skills that were observed. Prior to the first simulation session, the peer debriefer was given a teaching session on crisis-resource management (CRM) (3) and this was used as a template for the topics of conversation. The peer debriefer was advised to pick only 2 or 3 different aspects of the template rather than focusing on too many. In total, there were 8 simulation sessions, with each session lasting around 20 minutes with a 40 minute debriefing period. In regards to the simulation sessions themselves, there were 3 participants in each scenario. The first participant carried out the initial assessment with the other 2 students being involved once help was requested. Feedback was obtained from the students after each simulation session.

Results:
For the pilot scheme, there were 9 medical students in each simulation session with each student providing feedback forms for the sessions. Students were asked to rate on a scale from 1 to 5 how strongly they agreed with the following statements about peer debriefers, with 5 being strongly agreed and 1 strongly disagreed. The mean average for the statement ‘I feel that the presence of a peer debriefer was beneficial to my learning’ was 4.53 (range 3-5), for the statement ‘I feel that all student simulations should have a peer debriefer’ was 4.27 (range 2-5) and the statement ‘All students should get the opportunity to become a peer debriefer’ was 4.27 (range 2-5).

Discussion:
The use of peer debriefing provides a novel way for delivering simulation feedback in a way which is educationally beneficial for the participants. The results demonstrate that students felt the use of a peer debriefer was subjectively useful for their own learning and generally would like peer debriefers to be present for simulation sessions. It is likely that having someone who has only just recently experienced the simulations first-hand and who is able to reflect on that previous experience and compare it with the current scenario was seen as informative by the rest of the students. Likewise, the teaching which the peer debriefer received on non-technical skills and use of CRM is likely to have enabled further self-analysis of their own practice and thus ensure that teaching occurs both ways.
In conclusion, the use of peer debriefers for high fidelity simulation provides a great learning opportunity for both the student participants and the debriefer themselves.

References:
Peer Teaching a challenge for both students and teaching staff.
H S Yeo, E Rees, R McKinley
Keele University

Background:
Peer teaching is defined as teaching by ‘People from similar social groupings who are not professional teachers helping each other to learn and learning themselves by teaching’ 1. Peer teaching is recognised as an effective educational tool which provides additional educational opportunities and a platform for students to develop and refine their teaching skills 2; it can also improve students’ communication skills 3, knowledge acquisition 4, and clinical skills 5. However, the current literature is weighted towards the positive outcomes, with little study into the unforeseen challenges that arise during peer teaching. This study identified the challenges experienced by students and staff at two UK Medical Schools and explored the unintended consequences which arose.

Methodology:
Two disparate medical schools were chosen to compare the impact of contrasting: size of the student population, the establishment of the Medical Education society, governing student bodies, undergraduate curriculum, and the socio-cultural learning environment. Student focus groups and semi-structured interviews with staff were conducted in both schools. Peer tutors with experience of organising peer teaching from years two to five, and staff who currently teach the undergraduate curriculum, were recruited via snowball sampling. The audio recordings were transcribed and analysed using thematic analysis.

Results:
Fifteen students and four staff members (a senior staff member and a teaching fellow from each school) participated in this study. The challenges which students faced were: Staff engagement, Recruitment, Regulation of peer teaching, Curricular integration, Impact on staff, and Organisational support. In contrast, the faculty across both institutions were concerned by: Dissemination of ‘misinformation’, Lack of regulation, and Exam focused teaching. Concerns developed amongst staff as they became increasingly aware of the unintended consequences of peer teaching. These included ‘separate schooling’ amongst students and the perception that students prioritised peer teaching over faculty led teaching. To address these concerns, members of staff implemented policies which further perpetuated the challenges experienced by students and subsequently affected student-faculty relations.

Discussion:
This study explored the perceived challenges of peer teaching. Despite the contrasting educational cultures and differing peer teaching regulations across the two institutions, similar challenges were experienced amongst staff and students. The contrasts between staff and students’ perspectives on the challenges added depth to the study and helped build upon findings in existing literature. In particular, the unintended consequence of ‘separate schooling’ highlighted in this study was a contrast to previous research and challenges our current understanding of how students engage in peer teaching. Findings from this study provide an insight into an aspect of peer teaching that is poorly understood, and highlights areas for further research.

References:
Practical Simulation of the Research Process: An innovative introduction to academia
R Bhudia, P Mistry, M Law
Barts & The London

Background:
Simulation-based medical education is well-established in clinical skills teaching. We aimed to explore a novel application of simulation to familiarise second year medical students with the research process. The intervention aimed to increase confidence and research as well as facilitate decisions about future academic decisions such as those about intercalation.

Methodology:
The simulation began by participants receiving a hypothetical scenario from which they conceptualised a structured research question. Following deliberation in pairs, they submitted a research proposal. Facilitators returned this with feedback and hypothetical generated data. Participants statistically analysed this data and presented results in poster and oral formats for assessment.
In addition, supplementary workshops on Research Methods, Critical Analysis, Journal Club, Ethical Approval & Debate, Scientific Journalism, Publishing, Translating Research & Clinical Trials were run. An academic careers talk and visits to local research centres were also incorporated.
Facilitators were of various disciplines, both clinical and non-clinical; from research assistants and statisticians to professors and patients. This enabled participants to interact with, and appreciate, the multi-disciplinary aspect of academia. Participants also undertook written reflection following each session, developing this vital skill.

Results:
We ran a simulation of the research process as a pilot 2-week Student Selected Component (SSC) module for six Year 2 medical students, demonstrating feasibility of implementation. We collated feedback and evaluated attitudes towards research pre-and post-intervention.
5 out of 6 participants rated the usefulness of the intervention as ≥ 7 out of 10.
100% said they now enjoyed the prospect of research compared to 50% at the start of the intervention.
2/3 would likely or definitely recommend the intervention to their peers.

Discussion:
This pilot student-led study demonstrates the feasibility of a novel application of simulation to introduce key concepts of academia. The intervention can be adapted to any speciality by adjusting the hypothetical scenarios at the start giving this a wide scope; from undergraduate to postgraduate. Equipping students and trainees with academic skills may catalyse advancements in clinical care and so longitudinal follow-up of this cohort would be of interest.

Ref: 054, Board: R10
Pre-briefing in Simulation- How much is enough?
G McKay, R Robertson, L Bates
Mid Yorkshire Hospital Trust

Background:
Pre-briefing in simulation is considered a cardinal feature of successful learning and is described as the
communication between faculty and learners preceding a simulation course 1.
Dieckmann 2 posits that the purpose of pre-briefing is to prepare learners for an upcoming session by clarifying
expectations, logistics and learning objectives. Fanning and Gaba 3 add that facilitators can aptly utilise pre-briefing
as a means to create a supportive climate whereby students feel valued, respected, and able to engage in simulation
4.
Aim
To explore students engagement with pre-briefing material and determine ‘what information to include’ when
preparing students for simulation.

Methodology:
We reviewed a cohort of 18 final year medical students partaking in 8 simulated acute scenarios. In the scenarios,
students act as foundation doctors in assessing and managing unwell patients.
Prior to the course, we emailed students with learning objectives, recommended reading and national guidelines
for 4 of the 8 scenarios.
We collated information of students prior simulation experience with a survey.
We explored students engagement with the pre-briefing material and their perceptions of pre-briefing in simulation
via a survey and group discussion following the session.

Results:
The overwhelming majority of students, 88% (15), had previous simulation learning experience. 77% (13) of
students claimed that they had never received pre-briefing material prior to other simulation sessions.
From the survey to elicit engagement 61% (11) of students did not read the pre-briefing material provided and 66%
(12) did not prepare in any way for the simulation course.
10 (55%) students reported that they preferred the simulation scenario content to be a complete surprise and 11
(61%) commented that for future sessions, they would only wish to receive pre-briefing material for half of the
scenarios.
These findings were reinforced following discussions with students. The general consensus being that students
enjoyed the ‘surprise-factor’ of acute scenarios because it better replicated clinical practice.
Free text feedback for the course was ubiquitously positive and 12 students (66%) felt that the learning objectives
were successfully achieved

Discussion:
Many educationalists advocate pre-briefing because it can empower students to take ownership of their learning
and optimise their simulation experience 5.
It was therefore surprising to discover that the majority of our students did not engage with the pre-briefing
material and preferred to be ‘surprised’ by simulation content.
Perhaps our findings are due to the seniority of medical student and their previous experience with simulation
learning. It is possible that learners did not feel threatened by the ‘unknown’ and instead required high fidelity
experiences to mirror clinical practice. Alternatively, perhaps students are not motivated to take full responsibility
for their learning and instead perceive the facilitator as an information provider. Students may believe that
attendance at simulation sessions is sufficient to achieve the learning objectives.
From our study we posit that there is no ‘one-size fits all’ approach for pre-briefing in simulation. Instead we suggest
that it is necessary for facilitators to consider student perceptions prior to forming presumptions for pre-briefing
material.

References:
and S Edgar, ed.) John Wiley & Sons: Oxford
Lengerich: Pabst.
9(6):339-49

D Russell, G Bone, E Hicks
University Hospital of North Tees

Background:
Long Term Conditions (LTC) is an eight week module delivered in the 2nd semester of the third year undergraduate programme for medical students. Previous feedback from students is that it is 'just a repeat of last semester’s course - Foundations of Clinical Practice (FOCP)'. LTC's primary remit is to give the students an understanding about how chronic medical conditions such as diabetes and Parkinson's affect the lives of people and to build on the knowledge gained from FOCP.

In an attempt to counter this criticism of LTC we developed a half day interactive workshop. Clinical educators (CE) role played people with chronic conditions to highlight the effect of chronic conditions on patients' lives. The students worked through scenarios involving three different chronic conditions. This study was a pilot to evaluate the acceptability of this teaching method and to ascertain the attitudes of the students at the start of their LTC placement.

Simulated patients have been used in teaching communication skills (1) and role playing and have been found to be effective in teaching community medicine (2). We have traditional used real patients in LTC and wanted to look at whether role playing would improve students' understanding of the impact of chronic conditions of patients' lives. This is in line with the remit of the GMC guidance for medical students to understand the management of chronic conditions (3).

Methodology:
All students undergoing LTC in our base unit (three acute hospitals) underwent a half day session in which they undertook simulated consultations with CE playing the roles of patients with chronic conditions. The scripts were devised to concentrate on the social side of chronic conditions rather than the patho-physiology and medical treatment.

Sessions were designed in a carousel where individual students rotated through the consultations and received feedback from a facilitator and the CE on how they had dealt with the patients concerns.

Challenging scenarios were set including the situation where patients were non-concordant with medication due to the fact that they couldn't afford it or see the benefits. Students were asked to reflect on why this may happen and to look at the socio-economic effects.

A variety of learning methods were used including observation of a video of a patient with a chronic condition. The CE and facilitator helped the students understand how the condition affected a young patient.

The CE & facilitators undertook self-reflection on the session. The students were asked to complete a questionnaire using Likert scales and free text. The data were analysed for acceptability of teaching method, alignment to learning objectives. Common themes identified to determine what the students thought about the session overall and their understanding of the role of the LTC course compared to FOCP.

Results:
25 students completed the carousel divided over two sessions either morning or afternoon. All students responded and the faculty all reflected.

All domains rated highly (either good / very good) and there was 100% alignment to learning objectives. The faculty felt this was efficient use of teaching and set the scene for LTC in a very positive way.

Discussion:
Bringing all student together meant that they got the same message about LTC being different to FOCP and students appreciated that this was an extension of learning rather than repetition.

We plan to deliver this session at the start of all future LTC rotations this year and will modify scenarios based on feedback. The overall LTC experience will be evaluated at the end of each eight week placement and compared to previous years to ascertain whether attitudes to LTC have changed as a result of this intervention.

References:
Revealing the hidden curriculum to medical students: How do they perceive this has and will continue to influence them?
S Zamoyski, H Alberti
Newcastle University

Background:
The hidden curriculum embodies ‘the unspoken or implicit academic, social, and cultural messages that are communicated to students’ (1). This learning may support or differ from messages from the taught formal curriculum (2). Research has shown that medical students may have an erosion of empathy in their journey to becoming doctors as a result of the hidden curriculum (3).
Health Education England made a recommendation in their ‘By choice – not by chance’ report in 2016 for medical students to be taught about the hidden curriculum (1). This may contribute to reducing the effect of undermining a career in general practice has on the career choice of students (1).
This study aims to evaluate the impact of a seminar on ‘exploring the hidden curriculum’ on the professional development of the medical student in their journey from being a student to a doctor.

Methodology:
This study is an evaluation of a new seminar ‘exploring the hidden curriculum’ within the first semester of year 4 for medical students at Newcastle University. Ethical approval was granted. An email was sent to all (415) year 4 medical students with a link to a pre-seminar questionnaire and a post-seminar questionnaire, which the students were given time to complete during the seminar. Numerical data were analysed quantitatively and free text data analysed using thematic analysis using the Braun and Clark model (4).

Results:
There was a response rate of 60.2% for medical students who completed the pre-seminar questionnaire and 45.1% for the post-seminar questionnaire. Only 35 out of 246 students had heard of the concept of the ‘hidden curriculum’ prior to the seminar. Almost equal numbers of students perceived that the hidden curriculum had (124) or had not (122) influenced them so far at medical school.
Following the seminar, there was an overwhelming response of 176 out of 187 students who perceived the hidden curriculum to be a useful concept. The majority (173) believed this important to learn about as a medical student, with 166 of those recommending the seminar to future year groups.
Thematic analysis revealed five main themes:

1. Positive experiences of professionalism and communication
2. Ethical erosion
3. Self development
4. Positive and negative experiences of career stereotyping
5. Observations of a hierarchy within medicine

Discussion:
In conclusion, this study supports the literature highlighting that messages learned through the hidden curriculum may differ and conflict with those from the taught curriculum, as well as potentially leading to erosion of empathy (2,3). The data collected provides an understanding of how revealing the hidden curriculum to medical students can potentially influence their professional development.
This study shows that the medical students highly valued this seminar, which provides further weight to the recommendation made by Health Education England in 2016 for students to receive teaching on the hidden curriculum (1).
We recommend other institutions in the UK and worldwide to consider implementing teaching on the hidden curriculum for medical students, as well as considering introducing this to postgraduate specialty training programmes.

References:
Survey fatigue among medical students: are feedback surveys just an educational ritual?
D McCluskey, K Jones
Great Western Hospital, Swindon

Background:
Surveys are frequently used by higher education institutions to assess student experience of learning and teaching, to monitor course quality, and to contribute to staff development (1). These may be large national surveys, as demonstrated by the National Student Survey, or smaller, institution-specific, internally designed surveys. Medical student feedback surveys gathered on individual teaching encounters may be included as part of the latter. These surveys provide the students with a voice and, if utilised properly, should allow them to help shape their education, as well as providing the teacher with valuable professional feedback. At the Great Western Hospital (GWH) Swindon, following a successful pilot last year, the majority of student feedback is collected using a web-based form accessed via a QR code (2). Despite these attempts to make response to feedback easier, anecdotally medical students on placement at GWH have been heard to voice their frustration at the number of feedback surveys they are required to complete week to week. Completing feedback surveys can become ritual and may induce mechanistic responses (1). ‘Survey fatigue’ is a widely recognised disadvantage of multiple surveys, and may reduce response rate (3). Indeed, students in particular have been reported to feel over-surveyed (4). It was therefore decided to further explore the GWH student viewpoint, and if relevant identify ways of reducing feedback burden to ensure quality and usefulness of feedback.

Methodology:
All medical students on placement at GWH have been invited to participate in an initial online survey via their university email address. The survey comprises quantitative Likert-type scales and free-text boxes. The survey is still currently open, but an initial quantitative and qualitative data analysis has been performed. A focus group is planned for January 2018 with the aim of further exploring the themes generated by the survey, and a thematic analysis will then be performed.

Results:
Medical students (n=79) in their third, fourth and fifth year of study have been recruited to the online survey, with the response rate currently at 48%. Preliminary quantitative results from the sample show that 63% of the sample feel they are asked for feedback too often. Though the majority of students consider feedback to be important at least on some occasions, 40% do not feel students take giving feedback seriously. The two most prevalent reasons for not completing feedback were “planned to do it later, but forgot” (31%) and “tired of doing feedback forms” (20%). The majority of respondents feel that the number of questions included in the feedback forms is about right. Initial qualitative analysis has identified several themes, and included suggestions for refining/simplifying the feedback format, as well as communicating to students how feedback will be or has been used to improve the student experience. Several students had had negative experiences after giving “anonymous” feedback on teacher performance. A focus group conducted in January aims to explore these themes further, with the hope of identifying strategies to streamline the process.

Discussion:
Results from the survey so far suggest that medical students at GWH do feel feedback is asked for too frequently, and some are indeed experiencing ‘feedback fatigue’. One student felt “bombarded”, others felt the largely standardised forms were not always relevant to the session and so giving feedback “felt fruitless”. Dedicated time at the end of class might encourage those students who “forgot” to give feedback. More importantly though is the idea that feedback should have a clear purpose if student commitment to the process is to be maximised (1). It is also essential that results of feedback should be made available to the students. These ideas and others already mentioned will be discussed at the focus group and a final conclusion drawn thereafter.

References:

Ref: 264, Board: 54
The effect of survey and student characteristics on the quality of course evaluation in UK undergraduate medical education: A Systematic Review of the literature

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Newcastle University

Background:
The quality of health care is primarily a result of quality physicians. It is thus critical that high quality medical education exists to attain this goal. This can be achieved by continuously evaluating and improving medical education. This process of quality assurance has become critical in medical education due to the large number of learners, the high expenditures and accountability [1]. Response and completeness rates are considered key indicators of survey quality [2,3]. Despite the need for quality evaluations, course evaluation in undergraduate medical education is not optimised. The purpose of this report was to investigate the extent to which survey formatting (format, number of questions, delivery mode and timing) and student characteristics (age, gender, training year, performance and computer literacy) impact upon response rates and completeness rates in course evaluation of United Kingdom (UK) undergraduate medical education.

Methodology:
A literature search was performed using several databases (including ERIC and MEDLINE), five high impact medical education journals and grey literature. The key search terms were ‘course evaluation’ and ‘medical education’. The search was specific for UK undergraduate medical education student course evaluations that were published in the last 20 years. The main outcomes were response and completeness rates. A meta-analysis was completed for the outcome response rate.

Results:
Twenty-one publications (1999-2016) from six different journals met inclusion criteria [4-24]. Ninety percent were paper-based course evaluations. The average response rate was 86.7%. Course evaluation responses were mainly from females and younger students. The type of question (open-ended vs. closed-ended) did not affect response rate. A lower number of questions resulted in a higher response rate. Paper-based course evaluations had a higher response rate than online course evaluations. Having more than one course evaluation (before or at the start of the course and at the end or after the course) results in the highest response rate (90%). Information on completeness rate was minimal and incomplete at times.

Discussion:
Considering how critical course evaluation is to medical education there was little evidence in the literature to suggest that it is optimised with respect to response and completeness rate. This can affect the quality of information obtained, the decision-making process and change that may be necessary for improving a course or a curriculum. The gender and age response rate differences may be complex in nature but worth considering in new research and when designing a course evaluation. Making improvements on the format and timing of the evaluation may improve response rates. A lower number of questions decreases demand on the medical student while multiple evaluations improve engagement with the course, preparing students as to what is expected and simultaneously improving experience with evaluations. More than one evaluation leads to higher response rates because students after the first questionnaire (before or at the start of the course) are more aware of what is expected of them and what to expect in the course (including subsequent evaluations) thus becoming more critical and involved in the course. Further research is required to study the effects of student and survey characteristics on completeness rates.

References:
[20] Rashid, M.S., Sobowale, O., Gore, D. (2011) 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; 11:11

Ref: 275, Board: SS
The impact of emergency gynaecology simulation clinics on the affective component of learning in medical undergraduates

A Dempsey, C Morris, K Manley
University Bristol NHS Foundations Trust

Background:
The GMC medical undergraduate curriculum(1) states that students should be able to recognise and assess women presenting with early pregnancy conditions such as miscarriage and ectopics. Most foundations doctors will independently review these patients in an ED, GP or surgical setting(2). However undergraduate students, due to the emotional impact and acute nature of these conditions, often observe rather than perform supervised assessments. Undergraduates have expressed their emotional discomfort with intimate examinations which affects learning and mastering these important skills(3). The aim of this study was to evaluate whether an early pregnancy simulation clinic can facilitate the affective component of learning in these acute scenarios when compared to students who observe the management of these women.

Methodology:
A cohort study was conducted over an academic year. Learning outcomes and teaching materials for the simulation clinic were derived using the national undergraduate curriculum for Obstetrics and Gynaecology(1) and ratified through the use of a Delphi Consensus, involving experts in simulation and gynaecological emergencies. These materials were piloted for validity and reliability. To standardise the teaching, facilitators were provided with training on the material and the same facilitators were used throughout the academic year. Immediately after the scenario a baseline questionnaire detailing potential confounders was completed. Participants then scored their level of confidence in managing these conditions and satisfaction with the teaching method using validated questionnaires(4,5). A control group, consisting of students who had observed early pregnancy clinics but not attended the simulation teaching, also completed all three questionnaires.

Results:
Twenty seven participants attended the simulation session and 27 observed an early pregnancy clinic. Overall confidence scores were no different between the groups; median 36, IQR 33-40 for the simulation group and median 38, IQR 34-39 for the EPC group, p=0.81. Overall satisfaction with the teaching method was higher in the simulation group; median 103 (IQR 96 – 105) vs median 98 (IQR 90 – 104), p=0.02. Subgroup analysis revealed no difference in confidence between male and females in the simulation group (median 36 vs 38.5; p=0.19) but males who observed the EPC had higher confidence scores than the females (median 38.5 vs 35; p=0.05).

Discussion:
Our study demonstrates that emergency gynaecology simulation clinics improve student satisfaction. Evidence has shown that students value the opportunity to practise clinical skills without causing unpleasant consequences for the patient(6). Although confidence was no different between the two cohorts, males who observed the EPC were more confident in performing a clinical assessment than females. Competence does not correlate with confidence(7) and by attendance at the simulation clinic, male students may have gained insight into the challenges of these intimate consultations. Over-confidence can affect patient outcomes and this in combination with the increased student satisfaction with this teaching methodology highlights the value of these clinics – despite the resources required to run them. Future research should focus on assessment of competency following involvement in these clinics and the impact of feedback from ‘professional patients’.

References:
1. www.gmc-uk.org/education/obstetrics_and_gynaecology.asp
2. The Foundation Programme Curriculum 2016. www.foundationprograme.nhs.uk

Ref: 171, Board: S6
The Patient’s Journey, a Student’s Path
M Camilleri, E Chang, J Newman, JP Dilworth
Royal Free Hospital London

Background:
At a Central London teaching hospital we have introduced an enhanced interactive focused session for 4th year (first year clinical) students, in order to help them understand the context of their environment and their learning. Context as an entity in medical education has various meanings and definitions, but by placing a particular encounter within the context of an admission or a speciality into the context of a hospital, there is potential to increase understanding and knowledge retention.1 Additionally, context can increase commitment by appealing to different motivators via student’s attitudes, beliefs and identities.2 By introducing the students to broad concepts of hospital care through the demonstration of an entire patient journey, they can place their clinical interactions in the bigger picture. During this journey they are also presented with how they, as students, fit into this process and were introduced to various learning opportunities that arise during their placements.

The aims of this session were
• An introduction and induction into acute hospitals with a physical tour of learning environments
• A demonstration of a patient’s hospital journey
• A discussion on learning opportunities for students throughout a patient’s journey and how to maximise educational value in each area

Methodology:
The sessions were 1.5 hours, with small groups, taken on a physical journey through a hospital using a virtual patient. The sessions contained a tour through A&E, radiology, a ward and an outpatient clinic, with content to be covered in each department split into physical areas, staff, equipment/documents and concepts. All tutors were briefed on the format and key learning objectives and were given a document to use as an aide memoir with an example patient. Initially 5 sessions were undertaken using 3 Clinical Teaching Fellows as tutors at the beginning of the first clinical year for students. A second round of 13 sessions were undertaken at the beginning of the second academic term for an entire module cohort using 12 recruited tutors that were given written and verbal briefings. 18 Sessions were undertaken in total for 55 students. Feedback was gained immediately post session from each student, looking at how the session affected confidence in various environments and undertaking clerking as well as understanding of hospital processes. Confidence and understanding assessed on a 5 point Likert Scale, 1 being strongly disagree, 5 strongly agrees. Additionally, free text comments for improvements and learning points were invited.

Results:
The results of scoring on 5 point Likert scale (mode given) for rounds(R) 1 and 2:
Increased familiarity and knowledge of learning environments R1= 4, R2=5
Increased confidence in various learning environments R1= 4, R2=5
Increased knowledge of the multidisciplinary teams R1= 4, R2=5
Increased confidence in clerking on a ward R1=4, R2=5
Increased confidence in clerking in A&E R1=3, R2=4
Increase in understanding of process of radiological investigations R1= 4, R2=5
Increase in understanding of the admissions process R1= 4, R2=5
Increase in understanding of the discharge process R1=3, R2=5
Increase in understanding of the patient journey through an acute hospital R1=5, R2=5
Educational value of session R1=5, R2=5

Discussion:
We believe that these sessions give a broad introduction and induction into hospital medicine whilst placing students and their learning needs into the context of the hospital and the individual patient journey. We have shown that this increased confidence with their learning environment, undertaking confidence in clerking and understanding of concepts essential to how medical teams work. We have also demonstrated that the sessions are relatively simple, can be undertaken by non-expert tutors and can be provided for large numbers of students in an acute trust. Looking ahead, we will try to obtain post module feedback to assess the longer term impact of the session on student’s educational experience.

References:
Threshold concepts in psychiatry education at undergraduate level
R Khatri, J Knight, I Wilkinson
Brighton and Sussex Medical school

Background:
Threshold concepts were developed by Meyer and Land, and have often been compared to a portal, whereby once these concepts are understood, they open new ways of thinking about a discipline\(^1,2\). Threshold concept by their nature are often troublesome to grasp for the learner\(^2\).
Psychiatry is a field in which improvements in teaching could be crucial in shaping the attitudes of medical students towards it as a speciality, and potentially influence their decision to pursue it as a career\(^3,4\).
My aims were to identify threshold concepts in psychiatry that are essential to its understanding at undergraduate level at BSMS. To do this, the concepts students find difficult and troublesome must be understood and from that, threshold concepts can be identified\(^5\).
This is a type of transactional curriculum inquiry, which could produce recommendations to improve the course, and in turn influence the perception of psychiatry amongst medical students\(^5\).
The main aims are:
- To explore what concepts students find troublesome/challenging to grasp and why, and to understand the way this impacts on their perception of psychiatry as a field
- To evaluate whether these troublesome concepts are threshold concepts
- To explore the approaches which could be adopted to support students understanding of these concepts.

Methodology:
5-6 semi-structured interviews with psychiatric educators/trainers are conducted, and qualitatively analysed based on grounded theory principles\(^6,7\). The extent that understanding of the subject affects the learner’s relationship to the field of psychiatry is investigated.
In the second stage, threshold concepts are looked at from the perspective of the undergraduate students on these psychiatric placements at Brighton and Sussex medical school. A cohort of up to 40 students are purposely sampled and given a questionnaire electronically via email. Asking about what students found difficult to grasp will help in identifying whether these troublesome concepts are threshold concepts – these are identified in the analysis stage.
The results are analysed initially using the Framework method\(^8\). The recorded interviews are transcribed verbatim for analysis. They’re coded to generate themes and this is done using the appropriate software which will aid in the thematic analysis. The initial analysis is verified by my supervisor and co-supervisor who confers to ensure standardisation and minimise any potential bias.
The questionnaires are thematically analysed, to identify concepts and themes. The frequencies of different coded responses are considered. A constant comparative analysis approach is used, where there is a repeated comparison of information from the data collected.

Results:
Results will be presented in form of concepts and identified themes relating to threshold concepts

Discussion:
The identification of threshold concepts in the field of psychiatry at undergraduate level will be explored

References:
Undergraduate medical student perceptions of the purpose of reflective writing
D Elangaratnam, N Salooja
Imperial College, School of Medicine

Background:
Reflection is considered a central component of professional practice in both education and clinical medicine. Several models have been proposed in which critical analysis of experience is central.[1,2,3] Some, but not all models, also consider expression of emotion to be a key component [4] and this importance is cemented in some assessment grids of reflective writing.[5] In practice, the emotional content in reflective writing of our students is low,[6] but as reflection is multifaceted you would expect the relevance of emotion to vary depending on the intention behind the reflective activity. In this study, we have looked at student perceptions of the purpose of reflective writing with a view to informing and improving our teaching on the subject.

Methodology:
At the start of a teaching session on reflection, undergraduate medical students responded to the question ‘Why does the General Medical Council want students to reflect?’ on anonymised post-it notes. An initial pilot of 40 responses indicated that ‘to make you a better doctor’ was the dominant response. The study was therefore designed to include a more specific follow-up question: ‘Why does reflection make you a better doctor?’ Data to both of these questions was collected from four consecutive teaching groups between August and October 2017. Answers were transcribed verbatim in Excel and coded by two investigators independently. These were discussed to consensus following which themes were identified.

Results:
Data was collected from 93 students and included 277 items (132 to question 1 and 145 to question 2). 21 codes were identified, the most frequent of which from both questions were: learning from mistakes (n= 40), self-development (n=40) and improved performance (n= 37). 4 major themes were identified: 1. tautological responses e.g. ‘because we have to’, ‘to make us better doctors’ (n=102/277); 2. learning from experience (n=91/277); 3. self-awareness (n=67/277) and 4. development of critical/analytic thinking skills (n=17/277).

The second more specific question, was associated with a reduction in tautological responses. Students now highlighted learning (n=50/145) as a predominating factor in why reflection makes better doctors. Learning from mistakes was found to be a dominant sub theme (n=26/145), as well as developing life-long learning skills (n=14/145) and learning from strengths and weaknesses (n=10/145). Self-awareness identified as a theme (n=41/145) included responses pertaining to understanding and honesty in relation to limitations, strengths, knowledge and emotions. Finally, development of critical/analytic thinking skills (9/145). Notably the word emotion appeared only 6/277 times and the word resilience once.

Discussion:
This study indicates that students recognise that reflective practise can potentially improve their practice and make them better doctors. Many of the students did not express a clear concept of how reflection might do this. The most frequent view was that reflection enables one to learn from error. Less frequently, students identified that learning could take place from positive experiences including recognition of their strengths. Additional ways that reflection was proposed to lead to improved practice included improved analytical thinking and enhanced self-awareness. The value of analysing thoughts and feelings towards building resilience were notably absent despite its importance in professional practise. This may explain the low frequency of emotional content in our students’ reflective writing.

References:
Understanding Medical Students’ Perceptions of General Practice

R Lethem, S Singh, A Blythe
University of Bristol

Background:
The number of medical school graduates choosing to specialise in General Practice remains proportionately low compared to other specialties (1). To understand this trend, it is important to consider the influences behind medical students’ choices regarding career direction (2). This study seeks to analyse key influencers of medical students’ perceptions regarding General Practice, and to map the role these factors play at various stages of their time at medical school. It is hoped this kind of information will help to inform interventions to shape the way General Practice is taught at medical school and to optimise the way General Practice is perceived by medical students.

Methodology:
Data was collected via an online questionnaire sent to all 1334 University of Bristol medical students, between November-December 2017. Participants were asked about their current likelihood of pursuing a career in General Practice, how this had changed since starting medical school, and which factors had influenced this process. In addition, a comparison was made between the importance participants attached to various career factors, and how they perceived these factors within a prospective career in General Practice. A subgroup analysis across genders, age groups and year cohorts was also performed.

Results:
There were 360 responses to the questionnaire (27% response rate, compared to a similar national study (3), which attracted only 44 responses from University of Bristol medical students). Responses were distributed equally across all year cohorts. Overall, participants felt they were more likely to pursue a career as a GP since starting medical school. However, those closest to graduating from medical school scored the least of all year cohorts when asked on the likelihood that they would pursue a career as a GP. Students’ experience of clinical placements was overall the most influential factor in shaping perceptions of General Practice. However, how General Practice is portrayed by colleagues from other specialties appears to become a more influential factor towards the end of medical school. Participants rated good content of clinical work to be the most important factor to their career. However, this ranked poorly in participants’ perception of a career as a GP. The factors considered most important to participants’ careers was variable across genders; whilst males regarded good content and variety as the most important factors to their career, females regarded good patient contact and work-life balance to be the most important factors. The perception of these factors within a career as a GP was varied; only a relatively small proportion of males believed a career as a GP offered the factors most important to their career, whilst the opposite was true of females. Participants in later year cohorts regarded good content of clinical work to be the most important career factor. However, only a relatively small proportion of these year cohorts believed this to be an accurate factor within a career as a GP. A more comprehensive breakdown of the data will be presented.

Discussion:
Understanding which factors influence medical students’ perception of General Practice can help to explain why proportionally few medical school graduates are choosing to specialise in General Practice. This study has recognised the key influencers of medical students’ perceptions of General Practice, and has identified a mismatch between the factors medical students consider important to their careers and the factors they perceive a career in General Practice can offer. Together, this data can be useful to implement initiatives to develop primary care teaching and clinical placements by targeting specific areas of weakness highlighted by this study.

References:
Using Principles of Graphic Design to improve Educational Poster Readability
S Birks
University of Sheffield

Background:
Posters are a valuable resource for educational staff as a tool for presenting teaching material, displaying useful images for demonstration or as a confidence support for topics they may be less familiar with. They are also a valuable resource for students as a source of knowledge and presentation of useful images or text in a way that assist with consolidation. As students now rely more heavily on the internet and social media for their learning, and less on textbooks, educational posters must remain eye-catching and easily readable to hold interest. The design of an educational or conference presentation poster can have a significant impact on its readability, and may therefore hold the interest of the student or delegate for longer, or improve knowledge retention.

Methodology:
For the first year medical students at the University of Sheffield Medical School, I produced several educational posters for use during their ‘introduction to anatomy’ teaching sessions. Using readability-enhancing techniques from the field of web- and graphic-design, I utilised high-contrast colour schemes, bold fonts, engaging text layouts and crisp images to create a useful teaching resource that could be shared, printed and used for revision throughout their time as medical students. Examples of subtle but effective design techniques include specific choice of font and layout design, utilisation of contrasting colour and bold borders, and effective image acquisition and manipulation. After production of the A0-size posters and use during initial anatomy teaching sessions, I then distributed the posters to the students electronically and sought their feedback on their design. I also sought the feedback of the demonstrators that used the posters during their demonstration teaching.

Results:
Unanimously positive results were acquired from the 68 students that responded to the survey. All agreed that the posters were useful for learning anatomy and that they were easy to read. Over 75% of respondents strongly agreed that the choice of font, layout and colour schemes made the posters easier to read and learn from. Free text comments were also overwhelmingly positive with students reporting the posters as eye-catching with an appropriate amount of detail. Students also stated the colour-coding made them particularly clear at demonstrating the topic of the posters. The anatomy demonstrators leading each teaching station that I produced a poster for were also surveyed and they also agreed on the increased readability of the posters. They found them useful for demonstrating their teaching points that may have been harder to do without an image or text as a cue.

Discussion:
As stated, posters are a valuable educational resource and useful to demonstrators for teaching, and students for learning. With the addition of some advanced yet simple graphic design techniques, their readability and educational value can be increased which has been reflected in this project assessing student and demonstrator opinion of three posters. These methods of improving poster readability can be applied to all aspects of educational media, including presentation of posters and resources at conferences or medical schools. From this conference poster, all delegates will be able to take away some tips for not only poster design, but design of any educational resource of which they want to increase readability. The poster that will be presented will be produced with the graphic design techniques used for the anatomy resources as a way of demonstrating their effect.

Ref: 011, Board: T4
Using Team-Based Revision (TBR) to prepare medical students for the Prescribing Safety Assessment (PSA)
NJ Burstow, S Field, A Sam
Imperial College London

Background:
To reduce prescribing errors in clinical practice, final-year UK medical students sit the Prescribing Safety Assessment (PSA). To prepare students, we developed a modified form of Team-Based Learning, Team-Based Revision (TBR), which consolidates existing knowledge rather than covering new material. We evaluated students’ response to TBR and their perceptions of team-working.

Methodology:
Students were not given any specific preparation materials, but were informed that the sessions would cover pharmacology knowledge and prescribing skills to date. Eight Pharmacology TBR sessions were conducted by two tutors for Year 6 medical students over two days. TBR material was based on the domains of the PSA. During TBR sessions, students worked in small groups answering individual multiple-choice questions, followed by group multiple-choice questions. They then answered open-ended questions in their groups, with answers written on a drug chart to increase authenticity. To determine impact, students completed surveys using a standard 5-point Likert scale to determine views on TBR and a 10-point scale to determine their confidence in prescribing. Using a validated tool, we assessed attitudes towards team-working before and after TBR.

Results:
Eighty-six students completed both the pre- and the post-test questionnaire. The majority of students agreed/strongly agreed that the sessions were useful for preparation both for the PSA (82.6%) and Foundation Year 1 (79.1%). Ninety-two percent agreed/strongly agreed that using drug-charts aided learning. Prescribing confidence increased after TBR (median pre-session=2.6/10, post-session=4.5/10). TBR significantly improved attitudes towards “Team Experience” (p<0.05) and “Team Impact on Quality of Learning/Clinical Reasoning Ability” (p<0.05).

Discussion:
Team-based learning is a popular teaching method due to high levels of student engagement with relatively low resource requirements. However, its success depends on pre-course student motivation to cover pre-reading material. By building on existing knowledge TBR utilizes a similar approach to deliver high student engagement. We have shown that TBR, an adaptation of TBL to consolidate knowledge rather than cover new material, can complement preparation for the PSA. The use of drug charts and open-ended questions was viewed particularly favourably. A short course of TBR was sufficient to change attitudes towards teamwork, demonstrating the non-technical benefits of TBR alongside its educational benefits. Team Based Revision could be a useful, resource-efficient addition to undergraduate clinical pharmacology teaching and can help with preparation for the PSA.

Ref: 339, Board: T5
What is the impact of ranking medical students for postgraduate training programme applications?
E Keeling
Imperial College London

Background:
UK medical students who wish to complete the foundation programme apply via The Foundation Programme Application System (FPAS). Each student is scored on their educational performance, achievements and the Situational Judgement Test (SJT). The educational performance points are awarded according to their rank position in their year. The way students are ranked varies between schools; the higher the overall score, the more likely the student is to get their first choice of foundation posts. The foundation programme has been oversubscribed in some years increasing pressure on students to gain a high an overall score. Some areas, particularly London and Oxford, are highly competitive and only students with high FPAS scores are likely to get a job in these areas.

In my role as a personal tutor, students have expressed concern that they may receive a low ranking and therefore not get their preferred foundation post. They also discuss a competitive environment in part due to FPAS. Some students indicate they are strategic, putting more effort into modules or assessments that will affect their educational performance measure. In addition, competitiveness and student ranking is often discussed on medical blogs and in the student BMJ, but rarely in the published medical education literature.

Competitiveness and student ranking is often discussed on medical student blogs and in the student BMJ but rarely in the published medical education literature. Informally, students report a competitive environment and some have contributed this to the FPAS system. Many of our students have been the brightest in their years at school and on arrival at Medical school they find themselves being average or lower than average. Ranking is standard in US Higher education where class rank traditionally influences post-graduate recruitment. There is little written in the British medical education literature about ranking. Evidence from the economics education literature suggests that a ranking grade system versus traditional grade based system has a significant positive effect on student performance for higher performers and weak positive effect on low performers (1).

I aim to explore the impact that ranking has on our students and whether it alters their behaviours. I also aim to develop an understanding of whether ranking increases competitiveness between students and whether this encourages or inhibits performance and professional identity formation.

The General Medical Council is introducing a new national medical licensing exam in 2022 (2). The full details of this assessment are not yet known but all UK medical graduates will need to pass it to gain their full GMC license. There may be changes made to the local ranking and national application system in response to this new assessment to understanding the effect of the current system on students may assist in development of the future application process.

Methodology:
All final year medical students were invited to participate and students selected on a first-come-first served basis. I am currently conducting semi-structured interviews with Year 6 students to gain an understanding of their perceptions, feelings and behaviours. I aim to conduct 10 interviews in total. The interviews are being carried out after the students have submitted their applications but before they know the outcome to avoid an undesirable outcome affecting their perception of the ranking process.

The data will be transcribed and interpreted by me and thematic analysis of the data will be carried out.

Results:
The study will be completed by June 2018 and full results will be presented at the ASME Conference.

Discussion:
I will discuss my results, with particular focus on the impact on students behaviour, competitiveness, and professional identity formation.

References:

Ref: 392, Board: T6
Writing It Right: Does a teaching session affect the quality of medical student’s clinical documentation for the simulated assessment of an acutely unwell patient?

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University of Bristol (Gloucestershire Academy)

Background:
Accurate medical record-keeping is essential for patient safety and communication between healthcare professionals. A lack of good documentation has been associated with poor patient outcomes (1). Despite its importance there is evidence that documentation during the review of acutely unwell patients is inadequate; multiple reports from the NCEPOD have highlighted consistently poor standards of documentation when reviewing the medical records of sick patients (2, 3).

Many junior doctors feel they have not been adequately trained to perform this key aspect of clinical practice (4). Concerns have also been raised that there is little formal teaching on documentation and a subsequent reliance on on-the-job learning which may mean a lack of standardisation and fewer opportunities for feedback (5). This study will aim to see if an education and assessment program for accurate medical documentation would be effective in teaching this vital aspect of clinical practice to undergraduate medical students.

Methodology:
This is a mixed methodologies project with ethical approval granted by the University of Bristol. It includes the assessment of the clinical documentation skills of undergraduate medical students before and after a teaching intervention, and evaluation of students’ feedback after the teaching session.

Participants will be asked to document a videoed simulated assessment of an unwell patient before and after a teaching session. Two independent assessors will grade the documentations out of 16, using a marking scheme which has been derived from a validated tool (6). In addition marks are awarded for explicitly recording an ABC approach which is an important tool in the assessment of sick patients (7). As part of the mark scheme the assessors will also make a global judgement as to whether documentation constitutes a ‘safe’ representation of the videoed simulation. Students will provide feedback of the teaching with a Likert scale and white space questions.

Results:
A pilot study of ten medical students in December 2017 showed documentation improved by an average of 4 marks out of a total of 16 marks after the teaching session. There was a 300% improvement in the number of documentations considered by the assessors to be ‘safe’ after the teaching. 80% of the students thought the teaching session was useful and 90% thought they would use what they learnt in the session when they became an F1 doctor. Full results will be available for presentation at ASME.

Discussion:
The GMC mandate that clinical records should be ‘clear, accurate and legible’ (8), this is particularly important when assessing acutely unwell patients to promote patient safety. Final results will be the first to address whether teaching can improve documentation standards for the assessment of acutely unwell patients and used to consider whether such teaching should form part of the undergraduate curriculum.

References:
(4) Goldacre MJ, Taylor K, Lambert TW Views of junior doctors about whether their medical school prepared them well for work: questionnaire surveys. BMC Med Educ 2010;10:78
(8) General Medical Council (2013) Good Medical Practice. London, GMC (p9)
Abstracts submitted in the TEL category and accepted as Posters.
A Blended Learning Approach to Clinical Skills Teaching: E-learning for Paediatric Gait, Arms and Legs Examination (pGALS).

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Newcastle of University upon Tyne

Background:
Musculoskeletal (MSK) presentations in childhood are common and often present initially to clinicians who are not specialists in paediatric MSK medicine. Many doctors report lack of confidence and competence in paediatric MSK clinical skills relating to lack of teaching both at undergraduate (1) and postgraduate levels (2). The paediatric Gait, Arms, Legs and Spine (pGALS) examination is a clinical skill targeting non-specialists and is widely taught (3). One of the ongoing challenges in paediatric MSK education is the reliance on MSK specialists to deliver teaching yet often this resource is limited. Blended learning combines face-to-face with digital resources, and allows greater reach of students. Using an evidence-based approach, we have developed an e-learning module focused on paediatric MSK clinical skills to complement pGALS teaching, and describe the development and evaluation process.

Methodology:
Identification of the learning needs for this module came from previous research with medical students and general practitioners, alongside curriculum review and qualitative work with medical students. In conjunction with web-developers we developed an interactive, case-based module using key e-learning strategies such as question & answer, click and reveal, and reiteration of key learning points. The module focused on key elements; MSK history, pGALS maneuvers and common abnormalities found, red flags, next steps (investigations and management) and links to Paediatric Musculoskeletal matters website (www.pmmonline.org) for more information.
The evaluative strategy focused on qualitative methods including pre-testing and focus groups to allow a greater understanding of the user experience of both the module and perceptions of e-learning in general. Focus groups were audio-recorded, transcribed and underwent thematic analysis.

Results:
The final e-module had 22 pages, taking 30 minutes to complete. Emergent themes from the focus groups were positive and related to navigation and usability, content and language, application and reach, learning styles and use of technology. An iterative approach to the module development gave greater clarity to the case and presentation of key learning points. The students valued case-based learning and the use of questioning to re-inforce learning. They deemed the variety of modalities useful for their learning.

Discussion:
We have used a blended learning approach to widen the reach of paediatric MSK clinical skills. Iterative development of this e-learning module, in conjunction with learners, has led to a well-received resource as part of blended learning to complement face-to-face teaching. The module will be openly available to support teaching and learning of paediatric MSK clinical skills. Further e-module development is planned.

References:

Ref: 090, Board: TEL1
Can ‘Slacking’ facilitate medical curriculum delivery? A mixed methods exploration in an undergraduate education department
C Benson, D Churm, M Garside, K Howorth, J Fisher
Northumbria Healthcare Foundation Trust

Background:
Instant messaging applications are becoming ever more popular. The majority of medical students now possess a smartphone (1). Studies have shown that the use of instant messaging in medical education can encourage participation and improve communication between students and their tutors (1,2). Other theorised benefits have included the increased availability of learning resources and provision of a vehicle to clarify key curriculum points (3).

Our undergraduate education department have implemented ‘Slack’ with the aspiration that it will improve speed of information dissemination and promote further discussion between students and tutors. The aim of the study is to evaluate Stage 3 MBBS students’ engagement with Slack in order to refine its use for subsequent student cohorts. Our research questions are:

- What are the benefits of implementing an instant messaging platform to facilitate delivery of the FOCP curriculum to stage 3 MBBS Students?
- What are the barriers to implementation of this instant messaging platform?

Methodology:
Approval for the study has been granted by our local research and development department and Newcastle University’s research management group.

This will be a mixed methods projects consisting of three stages. Stage one will utilise the application’s analytical tool ‘slack analytics’ which provides automated data on the history of the group. It provides data on daily active users and their temporal engagement. Different channels have been created for small groups to discuss in outside of the public cohort group. We can review the contributions within these channels and perform content analysis of what is discussed.

Stage two will be a deeper exploration of students’ thoughts, opinions and attitudes towards Slack. Forty nine Stage 3 medical students have been invited to complete a survey outlining their experiences of Slack at the end of their rotation. Completion is voluntary and all responses will be anonymous. The responses will directly influence the topic guide for subsequent focus groups of student volunteers (stage three).

Participants for the focus group will be sought during the timetabled survey session, with the aim of recruiting ten volunteers. We will aim to run two one hour focus groups, each running with two facilitators. Participants will be asked to provide written consent. They will be reminded that their involvement is voluntary and that they can withdraw at any point. All opinions and statements will be anonymous and will not affect individual’s assessments. Survey results will be recorded on paper and audio recordings of the focus group discussion will be made. Both paper and digital files will be stored in a locked office only accessible by members of the research team. Faculty members who have worked in the department before and after the implementation of Slack will be invited by email to complete a survey regarding their experiences of Slack. This will also inform a topic guide for a focus group of volunteers from this cohort. Data will be thematically analysed to look for recurrent and insightful themes to draw conclusions from.

Results:
Results and conclusions drawn from upcoming survey, focus groups and the application’s analytical tool will synthesised and presented at the ASME ASM in July 2018.

References:
1) Raiman L, Antbring R, Mahmood A. WhatsApp messenger as a tool to supplement medical education for medical students on clinical attachment. BMC Medical Education. 2017; 17:7

Ref: 285, Board: TEL2
Can Virtual Reality Fully Immersive Interactive Technology (VR FIIT) use prior to simulation reduce stress response and improve learning?
NJ Cook, T Judd, I Hunter
Musgrove Park Hospital

Background:
It is a well-known fact that stressful situations are poor learning environments and with medical students the higher the level of stress the poorer the performance in examinations. As adult learners become more self-directed as they mature we aim to look at if fully immersive interactive video technology can therefore reduce the stress response to an assessment of a post-operative haemorrhage simulation and therefore improve learning with half the group receiving regular access to a training video and the other half not. We know that students who were shown a first person video prior to simulation showed improved performance when compared with those who weren’t. The aim of our study is to show that fully immersive video technology can do the same and reduce stress response in doing so.

Methodology:
We have devised a randomised controlled trial with 30 third year medical students. The students will be randomised into two groups with the intervention group receiving access to a fully immersive virtual reality video scenario prior to the simulation which they can access as regularly as they like and the control group not. The virtual video scenario has been designed and produced to show a patient having a post-operative haemorrhage and has been filmed using fully immersive interactive video technology which students will be able to access using their smart phones. A simulation will then take place on post-operative haemorrhage and students will have their heart rates measured throughout the duration of the simulation. Following the simulation all students will receive a questionnaire regarding their stress response towards the simulation. Each student will also have their “time to diagnose” measured and non-clinical skills will be measured using the Ottawa crisis resource management score to see if there is a difference between the two groups.

Results:
This study will be undertaken with 30 third year medical students over three separate academies between January and March 2018. A t-test will be used to analyse the heart rate stress response and “time to diagnose” measurements between the intervention and control groups and thematic analysis will be used to analyse the qualitative data on stress response and non-clinical skills. Our hypothesis is that students in the control group will score better in their simulation and have lower heart rates and a more positive response to the stress of the simulation.

Discussion:
Immersive VR can be used as an adjunct to simulation, as technology improves. In recent years it has become more readily accessible to all students and therefore its use should be expanded to benefit students. We aim to show that the use of VR will produce a lower stress response in students undertaking the simulation, which could this reduce stress in real life situations making VR invaluable for training.

References:

Ref: 375, Board: TEL3
Exploring student perceptions of virtual and augmented reality as a tool for learning in medicine

M Stanyon, N Ryan, L Carrier, S Kumar
Imperial College London

Background:
In this digital age, as technology enhanced learning (TEL) dominates, there is pressure on institutions to integrate the latest technologies into the medical curriculum. As technology permeates modern life, care must be taken that digitisation is done for pedagogical enhancement and in collaboration with students. Studies show virtual (VR) and augmented reality (AR) are positively received by students and educators1, however it remains unclear where and how best to implement them for greatest pedagogical advantage. Furthermore, a literature review demonstrated a paucity of evidence into student reflections on VR and AR in their medical education, leaving the voice of a key stakeholder absent. In view of the Imperial Learning and Teaching Strategy, which gives a mandate to exploring how best to integrate digital innovation in our instructional design in collaboration with students2, we conducted a series of focus groups with the primary aim of exploring student perceptions into VR/AR as a tool for learning in medicine; identifying how comfortable they felt using VR/AR, where they felt VR/AR had a role compared to traditional teaching methods including real patients/patient actors, and where they felt VR/AR could improve their learning experience in medicine.

Methodology:
Undergraduate medical students were recruited through lecture shout-outs, intranet and student union advertising. Ethics approval was sought. A total of seven students were recruited and two focus groups held. Transcripts were anonymised and thematically analysed by two researchers with the results discussed to consensus.

Results:
The focus groups consisted of seven undergraduate medical students (three female and four male), with both pre-clinical and clinical years represented. Students ranged from novices without prior experience to avid gamers familiar with both technologies. Most had not used VR or AR in their medical education, and for those who had, this had been a one-off experience with a surgical simulator. All were confident they could pick up how to use the equipment, but agreed formal training would be required. They felt VR/AR gave them opportunities for new experiences, gave them confidence to try things they would not in the real world but also raised concerns that this may lead to overconfidence, desensitisation and ‘fake’ empathy. All agreed that VR/AR had advantages over patients/patient actors, in standardisation and practising scenarios distressing for patients. However, there was disagreement as to the degree it was possible to bond with virtual patients, and a strong universal opinion that VR avatars should be an addition to, not a replacement for real patient exposure. Overall students felt VR/AR was best utilised in early year teaching, to complement anatomy and physiology teaching, with a role in transition from pre-clinical to clinical years in initially acquiring clinical communication skills.

Discussion:
We found students have clear views about where they see VR and AR technology in their medical education. Our work highlights how most students had not used VR or AR in their medical education, but feel this a key part of learning in medicine and are keen to adapt to this. Our research suggests medical students are familiar with VR/AR technology but lack experience, highlighting that sessions using VR/AR elements would need to have training incorporated. Students had strong preferences for where they felt VR/AR technology was best used, suggesting a role in supporting transition to clinical environments in the early years, in addition to enhancing anatomy and physiology teaching. Interestingly students expressed concerns that VR/AR avatars would be used as a substitute for patient contact, demonstrating their high value of patient contact. Our results show student reflection on new technologies can influence how best to integrate VR/AR into the curriculum, strongly supporting working with students as partners in shaping the digital strategy for instructional design.

References:
Immersive Virtual Reality as a Cost-Effective Alternative to Traditional Undergraduate and Postgraduate Medical Education

D Malik, A Magnussen
Imperial College Healthcare NHS Trust

**Background:**
Simulation in medical education has been a hot topic for some time and various options are available commercially. Unfortunately, simulation suites and equipment are often very expensive, limiting student exposure or increasing group sizes in institutions which may be able to afford them. Ultimately, simulated environments lack immersion which limits transition into real-world practice. However, with recent commercial sector investment and advances, the cost of virtual reality technology has greatly reduced, promoting new interest in this area and the immersion it provides. However, studies into their use in medical education has been limited and as such, we aimed to identify if we could develop a cost-effective solution.

**Methodology:**
We utilised focus groups of undergraduate and postgraduate medical students to initially identify areas of their curriculum they found challenging. We used this to develop virtual reality scenarios using a commercially available 360° camera. This was then developed into an application which could be loaded onto any smartphone and viewed with a smartphone compatible headset. An independent group of undergraduate and postgraduate students then used the software before providing feedback against a set questionnaire utilising a Likert scale.

**Results:**
100% of undergraduate students agreed the technology had the potential to be an effective learning tool with over 90% agreeing it was more valuable than watching as standard video alone. Postgraduate students showed similar experiences with the two virtual reality scenarios with 81% strongly agreeing that the one-on-one nature of the tutorial was invaluable and 72% finding the tool to be as if they were in the actual environment and actively engaging. Over 90% of both undergraduate and postgraduate students felt that the tool would be useful as an app or online for home usage as a learning resource as well as the ability to revise 'on the go'.

**Discussion:**
Overall, we find that both undergraduate and postgraduate students alike not only enjoyed the use of immersive virtual reality technologies but also found them to be incredibly useful in comparison to traditional teaching environments and learning resources. In addition, the cost in comparison to other simulation options available was considerably cost-effective with the total cost of camera and headsets for students being under 500 GBP. Additionally, with ease of use, institutions or individuals may develop their own virtual reality learning environments to suit the learners' needs. As such, immersive virtual reality scenarios may be developed using cheap technology, whilst providing a high quality learning tool.

*Ref: 407, Board: TEL5*
Time after Time: Do repetition learning apps help knowledge retention in medical students?
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Gloucestershire Academy, University of Bristol

Background:
Medical students are required to retain increasingly larger amount of information [1]. Retention can be improved in doctors and medical students though the revision of knowledge at increasingly longer time intervals; a technique known as Spaced Repetition (SR) [2-6]. This has also been shown to increase confidence and decrease anxiety in medical students [7].

Repetition of covered topics can be difficult to facilitate in a modern crowded curriculum. A possible solution to this is through Technology Enhanced Learning (TEL), namely smartphone ‘Learning applications’ (apps). Many apps use confidence based spaced repetition to improve knowledge retention. Apps generally do this by showing students flash card questions and after revealing the answers ask students to rate how confident they feel. Over time these apps notify the student at spaced time intervals when they are recommended to view flashcards. Flashcards that the student has previously rated as ‘Low confidence’ will appear more often until the student indicates that their confidence has grown [8].

Presently there is little evidence of SR effectiveness in UK medical students although there is some evidence from the US [2-6]. This is despite the use of SR in commercial question banks popular among UK medical students [9].

This study aims to compare the retention of Arterial Blood Gas (ABG) and Electrocardiogram (ECG) seminar knowledge in third year medical students using an app to facilitate bespoke spaced repetition against those who are given a handout. Student confidence and their perceptions of the app compared to handouts will also be explored.

Methodology:
This is a teaching evaluation with a crossover design spanning three months. This evaluation has been granted ethical approval by University of Bristol.

Third year medical students will be recruited after a teaching session based on ABGs. They will then be divided into two groups. The first group (A) will be enrolled into an app that will contain ABG materials based upon the ABG lecture. The second group (B) will be given a handout based upon the ABG lecture. One month later students will complete an ABG knowledge quiz followed by an ECG lecture. Group A, who previously used the app, will then be given an ECG handout. Group B, who previously used the ABG handout, will be enrolled in the app containing ECG materials. A month later students will be asked to complete an ECG knowledge quiz. Participants will be asked at the end of the project to complete an anonymous questionnaire exploring their thoughts of using the app compared to handouts. Usage data from the app will also be collected.

Results:
Full statistical and descriptive results will be available for presentation at the annual scientific meeting.

Discussion:
Medical student research on spaced repetitive learning is sparse in the UK, despite the rise of spaced repetitive learning in commercial question banks. This study will observe the effect of implementing spaced repetitive learning into a clinical placement through a mobile phone application. We will aim to measure student retention of knowledge and confidence regarding specific topics after the use of this spaced repetitive learning application for knowledge consolidation. We will compare these outcomes to those students given handouts for consolidation.

References:
Using the Microsoft Hub in facilitating multi-centre research between University of Bristol Academies

Great Western Hospital (Swindon Academy, University of Bristol)

Background:
Producing multi-centre research can be a lengthy but rewarding journey often used in medical research to accrue large amounts data quickly(1). Similarly in medical education: discussing projects, practically developing ideas and sharing documents between different centres are all important in producing multicentre research. However, not all of these are easily done over 2 or more sites.

University of Bristol medical school recently invested in a number of Microsoft Hubs at each of the seven academies. The device offers video conferencing and recording software, a shared whiteboard which is available to edit from all parties and instant-sharing of Microsoft Office documents(2). As a new addition to the technological capabilities of the University of Bristol Academies, we felt it appropriate to evaluate the Hub’s potential to assist multi-centre research so that future years may realise this potential and continue to develop medical education for generations of future doctors.

Methodology:
All Academy teams at University of Bristol were invited to be involved in evaluating the use of the Hub in facilitating collaborative multi-centre educational research between Clinical Teaching Fellows (CTFs) at each Academy. A monthly meeting was set up, open for attendance by all CTFs, where project ideas could be shared on the electronic shared whiteboard before being discussed and developed over video-conference software. After each meeting, an evaluation survey was distributed to all CTFs and completed by those that attended. The aim was to evaluate the effectiveness of the Hub in facilitating collaborative research, beyond what would be possible by face-to-face meetings or using other video-conferencing software.

Results:
Four meetings have been held to date, with four academies being represented. Results are currently awaited but initial findings are encouraging with several projects being collaboratively developed across the various Academies. Thus far five projects have benefitted from the interacademy working giving a broader audience when developing ideas and improving recruitment.

Provisional results note a total of five meetings with attendees from four different academies. The evaluation survey details a distinct improvement in a number of areas from the first meeting. At the most recent meeting, 100% of attendees agreed the shared whiteboard aided presentation of ideas and provided a reliable record of meeting minutes and action points. In addition, 100% of attendees reported that they felt the meeting goals were achieved and that SMART action points were in place at the conclusion. However, most significantly, 75% of attendees strongly-agreed that the most recent meeting was enhanced by the use of the Hub. The shared whiteboard has been explicitly mentioned in the comments as a particularly good element in the context of discussing research. We feel with this technology enhancing our meetings it has been much easier to facilitate coordination of research between academies.

Discussion:
There are multiple advantages of multi-site research: quicker recruitment of a larger sample group, the ability to compare results between sites and production of more accurate and generalizable results. Potential problems include motivating all members of the team to play a passionate role in each study, the uniformity of the study protocols across sites and the funding to run more studies at each site. Equally, agreeing a mutually convenient time for centres to meet, either in person or over video-conferencing, is notoriously difficult in today’s fast-paced world of medical education. Using this innovative technology has greatly facilitated working between distant academies, beyond what is possible using simple video-conferencing software.

References:
Virtual reality Fully Immersive Interactive Technology (VR FIIT). A comparison with tutorial teaching.
NJ Cook, T Judd, I Hunter
Musgrove Park Hospital

Background:
With the birth of the smart phone there is now a rapid expansion in the use of this technology to improve and enhance medical education. A recent literature review by Valle et al. concluded “Smartphone use is clearly an effective and efficient method of enhancing patient care and medical education in the health care industry.”
The “Virtual patient” is not new to medical education. Kononowicz et al. (2015) explored what was meant by virtual patients in educational literature stating, “The primary forms of Virtual Patients in the educational literature are Interactive Patient Scenarios despite rapid technical advances that would nowadays support more complex applications.”
The aim of this project is to compare and combine these two separate advances in technology and medical education, with the aim of making fully immersive interactive videos scenarios that students will be able to access on their phone.
We also aim to compare this new technology with that of a standard tutorial to see if there is any difference in knowledge-gain and confidence.

Methodology:
30 third year medical students will be randomised into 2 groups. We have designed and produced a virtual reality scenario of a patient having a post-operative haemorrhage which has been filmed using virtual reality fully immersive interactive video technology (VR FIIT). Group 1 (intervention group) will receive the virtual reality video scenario and Group 2 (control group) will receive a tutorial on the treatment of post-operative haemorrhage. All 30 students will receive a test prior to their teaching method and the same test following the teaching session to test knowledge-gain. We will also ask the students about their experiences with the teaching sessions and how engaging they found them as well as questioning them on their confidence in managing post-operative haemorrhage following the teaching.

Results:
This study will be undertaken across three separate sites between January and March 2018. Thematic analysis will be used to analyse the students qualitative comments on engagement and confidence following teaching session and we will use a T-test to analyse the quantitative data with regard to knowledge gain.

Discussion:
By combining a virtual patient with fully immersive interactive videos we hope to enhance clinical decision making and add realism and authenticity. Previous work has shown that virtual patients improve learning. We hope that this method is as effect and is mobile as available on mobile devices. Following proof of concept, the next step is to compare computer based e-learning vs fully immersive technology.

References:

Ref: 372, Board: TEL8
Virtual Reality Fully Immersive Interactive Technology. Can this enhance simulation training and reduce skill fade?
T Judd, N Cook, I Hunter
Taunton and Somerset NHS Foundation Trust

Background:
Simulation training can be quite time intensive making it difficult to fit into day to day clinical practice. With increasing clinical demands, it is becoming more difficult to run simulation sessions due to them being faculty intensive1.
We have developed a method of Virtual Reality Fully Immersive Interactive Technology Teaching (VR FIITT) where a student may be fully immersed in a virtual reality teaching scenario. With the capability to use smart phones with software platforms to deliver virtual reality, Medical students can use virtual reality to aid/enhance simulation training.
This technology also has the potential to limit skill fade once a simulation course has been delivered. Previous research has shown that a refresher course of Basic Life Support (BLS) at six months means a student can retain their skills for one year2. However, simulation courses this frequent are difficult to deliver due to time pressure on faculty, students and staff. This along with the cost of running these courses means skill fade (especially for resuscitation skills) is a real problem, with most practitioners losing their skills within 3 months3.
The aim of this research is to see if a blended course of BLS training plus VR FIITT can improve resuscitation training, and address the issue of skill fade of resuscitation skills.

Methodology:
30 preclinical medical students that have not received any life-support training will be recruited. They will then be randomised into two groups. The first group will be the control and receive standard BLS training. The second group will be the intervention group and will have access to VR FIITT on their phones to view as many times as they wish alongside the standard BLS course.
After the training, all students will then undergo a simulation that will test the elements taught in the BLS course. Cardiopulmonary resuscitation (CPR) will be evaluated by assessing, hand position, rate and depth of compressions. Key times will also be measure, time to call for help, time till AED attached.
A follow up simulation will be done after 3 months. Where the control group will have had no further training, and the intervention group will have had unlimited access to the VR FIITT. We will then retest the students with another BLS scenario and measure the same outcomes to see if there is a difference between the two groups.

Results:
The hypothesis is that the students that have access to the VR FIITT will perform better in the initial test scenario. We also expect to see less of a decline in test scores in the intervention group when they are retested 3 months after the initial training.

Discussion:
VR technology has now reached a point where it has become a lot more accessible to medical students, and a lot cheaper to provide. This provides a tool which can be used to provided VR FIITT anywhere the students wish to access it. This research project hopes to show that in this fast-growing field, VR will have an ever more important role in using alongside/replacing simulation. With ever more increasing clinical pressures and difficulty for clinical staff to keep up competency based training, VR has an important role in limiting skill fade. Especially due to its low time demand, and reduced faculty needs.

References:

Ref: 225, Board:TEL9
Virtual Reality Fully Immersive Interactive Technology. Can this improve medical students’ preparedness for resuscitation?
T Judd, N Cook, I Hunter
Taunton and Somerset NHS Foundation Trust

Background:
Cardiopulmonary resuscitation (CPR) is outlined as a prerequisite for doctors by the general medical council1. However, there is growing concern about the lack of emphasis placed on this skill and the reinforcement of basic life support (BLS) skills within medical schools2. Over 60% of 4th year medical students lack confidence in dealing with cardiac arrest situations3. Also, over 35% of final year medical students felt reluctant to participate in resuscitation as they felt unprepared4. Recent technology advancements allow a smartphone to be converted into a virtual reality headset. We have developed a method of Virtual Reality Fully Immersive Interactive Technology Teaching (VR FIITT) where a student may be fully immersed in a virtual reality teaching scenario. The aim of this project is to assess the confidence of medical students in dealing with resuscitation, whilst developing their skills in advance of exposure to real life cardiac arrest as a junior doctor.

Methodology:
30 final year students will be recruited and randomly allocated into two groups. These students will have received ILS during their final year placement. All students will complete an initial questionnaire assessing how prepared they feel and their anxiety levels towards resuscitation. The students will all individually take part in a simulation where they will be the first junior doctor to arrive at a cardiac arrest. The control group will not have any intervention. The intervention group will have access to VR FIITT of a cardiac arrest on their phone. They will be allowed to access it as frequently as they wish. Both groups will then repeat the questionnaire after the simulation to see if there is any difference between the two groups. We will assess the students’ performance in the simulation by assessing, hand position, rate and depth of compressions of CPR. Key times will also be measure, time to call for help, time till AED attached.

Results:
The hypothesis is that students that have used VR FIITT will have better engagement with the simulation scenario due to reduced anxiety levels, and feel more prepared to manage the situation. We are assessing the students’ performance in the simulation to see if the use of VR FIITT leads to an improvement in performance under pressure.

Discussion:
The nature of resuscitation events is a main factor in why medical students feel underprepared to attend resuscitation calls as a newly qualified junior doctor. Improvements in technology open up the possibility to increase exposure of these events to medical students by using VR FIITT. They can help to reduce anxiety, and potentially improve performance, when faced with these events in real life.

References:

Ref: 222, Board: TEL10