Conference Papers & Abstracts

BT Murrayfield Stadium, Edinburgh
15 - 17 July 2015
Inspiration and Innovation in Healthcare Education
Paper and electronic exam delivery system

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All information correct at time of print/subject to change
Dear Delegates

Welcome to the 2015 Annual Scientific Meeting, **Inspiration and Innovation in Healthcare Education**, Edinburgh, 15-17 July.

The ASME Annual Scientific Meeting encompasses the continuum of medical education, from undergraduate through postgraduate and continuing medical education.

This conference is a forum for all medical/healthcare educators with undergraduate, postgraduate or CPD responsibilities and interests. It is an opportunity to report and discuss themes, research and initiatives with colleagues from the UK and abroad.

This year’s programme has been developed with the recently formed Steering Group which has responded to delegate feedback from this conference over the last couple of years. The conference continues to offer excellent opportunities for delegates to discuss innovations in medical/healthcare education as well as offering excellent networking opportunities.

This year’s programme includes:

- A variety of pre and intra-conference workshops, including sessions on NHS Education for Scotland’s Mobile Skills Unit
- Keynote presentations, including the Lord Cohen Lecture
- Parallel sessions, including presentations from the successful applicants for the joint ASME/GMC Excellent Medical Education Awards
- Poster presentations
- The awarding of the New Researcher Award and the Sir John Ellis Student prize
- Sessions from our Special Interest Groups
- The launch of the Researching Medical Education text book
- Relevant exhibitors from all areas of medical education
- Social events, including the Welcome Reception and Annual Dinner

I do hope you enjoy this year’s conference. As always, we value your feedback and will be in touch after the event to ask you to complete a short questionnaire giving your view of this year’s event.

Best wishes

**Nicky Pender**

Nicky Pender
CEO

Wifi details for the duration of the conference:
Search available networks for **TME**
Password (lowercase): **exp123**
Speakers’ Biographies

Steve Peters
University of Sheffield, UK
The Lord Cohen Lecture:
“Optimising the Performance of the Human Mind”
Biography

Wendy Reid
Director of Education and Quality, Health Education England
“How medical education needs to adapt to changing population needs and technology advances across the UK”
Biography

James Robson
Chief Medical Officer and Head of Anti-Doping, Scottish Rugby Union, Edinburgh
Final Prenary:
“Scoring with education – a reflective practice in international sports medicine”
Biography

Val Wass
Head of School, Keele University
The ASME Gold Medal 2015:
“Through the Looking Glass”
Biography

Pre-Conference Workshops

CALM – Change, Adaptive Leadership and Management
Tuesday 14th July 10.00am-4.00pm

TEL – Creating innovative, fun and engaging online content: navigating the e-learning minefield
Tuesday 14th July 10.00am-4.00pm

CMER – Conducting Medical Education Research - 14th July 2015
Tuesday 14th July 10.00am-4.00pm

Leadership Development in a Trainer’s Portfolio
Tuesday 14th July 8.30am-11.45am
### Intra-Conference Workshops

Presenting Skills for New Presenters

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#### JASME Pathways Sessions

1. Simulation Workshop - Developing a sustainable and resilient simulation centre

2. ERG/NIHR Workshop - Funding for Medical Education

3. Assessment/Psychometrics - Understanding and using item-level metrics to improve the quality of single best answer question

4. Writing for publication (Medical Education & The Clinical Teacher)

5. ERG Workshop - Support for budding researchers

6. JASME Workshop – Teaching and Simulation

7. TASME workshop - Developing your teaching & medical education portfolio

8. EDG workshop - Building Medical Education Momentum within your Organisation

9. Teaching Case Presentation

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### Cultures of Learning

### Leadership Development Group Forum

### Education Research Group: Building Research Networks

### JASME Research Methods

### TASME Teaching Innovation and Excellence Award

### Meeting of MSc Course Lead/Programme Directors
Mobile Skills Unit

Practice your Skills with Adam Rouilly

Laerdal Workshop
What drives your educational programs? Innovation, Inspiration or Sustainability

Sports Medicine Team Organisation and Pitchside Skills
With Peter Johnston, ASME Executive Member

What’s Hot in Learning and Teaching Innovations in Medical Education?

What’s Hot Programme

Educator Innovator Award 2015
The Association for Elderly Medicine Education (AEME)

Student self-assessment, perceived workload and satisfaction with academic feedback: a multi-year study of over 500 students

Health numeracy in medical graduates

The Purple Sticker Initiative

ASME Grants & Awards

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Abstracts

Acknowledgements
Speakers’ Biographies
Professor Steve Peters
Consultant Psychiatrist / Undergraduate Dean Sheffield Medical School.

Prof Steve Peters is a Consultant Psychiatrist working in Elite Sport. He works with Liverpool Football Club, England Football and Sky ProCycling, and has current and past involvements in many other Olympic and non-Olympic Sports, including, British Cycling, England Rugby, World Championship Snooker and Premier league Football.

His career began with teaching Mathematics and then moved on to Medicine. He has worked in the clinical field of Psychiatry for the past twenty years including Clinical Director of the Mental Health Services at Bassetlaw Trust, culminating in working at Rampton Secure Hospital. Steve has been with Sheffield University as a Senior Clinical Lecturer since 1994 and is also Undergraduate Dean. He holds degrees in Mathematics, Medicine and Medical Education (Masters Degree) and also postgraduate qualifications in Sports Medicine, Education and Psychiatry.

He is a member of the Royal College and is on the College Membership Panel for examinations. He is a member of the Therapeutic Use Exemption Panel for UK Sport and an expert witness to WADA (World Anti-doping Agency).

He is author of the best-selling personal development book ‘The Chimp Paradox’. His specialist interest is in the working of the human mind and how it can reach optimum performance applied to all walks of life.

For fun, he competes in Track and Field Athletics and has held multiple World Masters Champion Titles and World Records over the 100, 200 and 400 metres.

Professor Wendy Reid
Professor Reid was appointed Director of Education and Quality for HEE in 2014, in addition to her role as HEE’s first Medical Director.

She joined HEE from her role as postgraduate dean in London. As a postgraduate dean she had led the Hospital at Night national team and worked as the clinical advisor to the DH on the European Working Time Directive.

She did her undergraduate training at the Royal Free and became an Obstetrician & Gynaecologist working as a consultant at The Free where she continues to practice as a Gynaecologist. She was the Vice President for Education at the RCOG and was responsible for significant innovations ranging from the implementation of new examination techniques to being the primary author behind the report ‘Tomorrow’s Specialist’ which addresses the issue of generalism in the context of high quality care for women. She holds an honorary chair at Bart’s & The Royal London.

She is keen to promote multi professional workforce solutions for high quality patient care and to encourage wide participation across all health care roles. She was a founding council member of the Faculty of Medical Leadership and Management and is delighted that HEE promotes clinical leadership throughout its organisation.
James Robson
Born 24.11.57 in Whitehaven.

James Robson has been team doctor on the last six consecutive tours by the British and Irish Lions (New Zealand 1993, South Africa 1997, Australia 2001, New Zealand 2005, South Africa 2009 and Australia 2013).

He joined the Scotland team as doctor at the start of season 2002/2003 following his previous position as physiotherapist from 1991-96 and has now been team doctor for more than 150 Scotland Test matches, including the Rugby World Cup competitions in 2003, 2007 and 2011.

He was doctor for Scotland A from 1998 – 2002 and the doctor/physio for Scotland 7s from 1996 – 2001. Prior to becoming Scottish Rugby’s Chief Medical Officer, James, was a GP in Dundee.

He was awarded a Fellowship ad hominem by the Royal College of Surgeons, Edinburgh in November 2010; and is also a Fellow of the Royal College of General Practice, and the Faculty of Sport & Exercise Medicine, and a Member of the Charted Society of Physiotherapists. He is married with two teenage daughters.

Professor Val Wass OBE
BSc (Hons), FRCGP, FRCP, MHPE, PhD, PFHEA

Val Wass is Emeritus Professor in Medical Education in the Faculty of Health at Keele University. She retired in February 2015 from her appointment as Head of the School of Medicine at Keele which she had led since December 2009.

She worked originally for ten years in Paediatric and Adult Nephrology and then moved to train in Primary Care as she became increasingly interested in holistic patient health. She practised for eleven years as a General Practitioner in Kent before moving back into Academic Medicine at Guy’s, Kings and St Thomas’s Medical school as a senior lecturer in Primary Care (1995-2003) and then Community Based Medical Education at the University of Manchester (2003-2009).

She studied the International Masters in Health Profession Education (MHPE) at Maastricht University in the Netherlands and has a long term interest in assessment methodology as a result of work on postgraduate examinations at the Royal College of General Practitioners and in undergraduate medical school assessment. This led to a PhD in Maastricht comparing traditional and new assessment methodologies which informed the international move to a more programmatic workplace based approach to assessment. Increasingly her work has focused on professionalism and the impact of ethnic diversity on learning, communication and achievement. In 2008 she was awarded a National Teaching Fellowship by the UK Higher Education Academy in recognition of her work in education.

Over the past five years she has been elected to key national positions: Member of the UK Medical School Council Executive, Chair of the Medical School Council Assessment Alliance, Founder member of the European Board of Medical Assessment (EBMA) and Chair of the Royal College of General Practitioners International Committee. Internationally she has led consultations in over 20 countries to advise on undergraduate and postgraduate curriculum development and assessment and from 2003-2015 was the RCGP International Development Advisor for MRCGP[INT] South Asia and supported the development and implementation of a Family Medicine Accreditation across five nations.

She recently received the RCGP President’s International medal for exceptionally meritorious international work and the 2015 Association for the Study of Medical Education Gold medal for her outstanding contributions. In the 2015 Queen’s New Year’s Honour list she became an Officer of the British Empire for her services to medical education.
Pre-Conference Workshops
CALM – Change, Adaptive Leadership and Management - 14th July 2015

A standalone Workshop provided as part of the ASME Leadership and Management in Education programme. This one day workshop provides an introduction to the key concepts of change and adaptive leadership for healthcare educators who wish to develop a deeper understanding of leadership and management theory, how to manage change and gain an evidence base to help them become more effective leaders in a complex world. The workshop comprises interactive group activities, short presentations and individual exercises aimed towards gaining insight into how change can be planned for, managed and led from personal, interpersonal and organisational perspectives. Core topics include the leader as an agent of change; psychological responses to change; models of change management; leading teams through change; change in complex organisations and contexts; setting personal goals and action planning.

Workshop will run 10am - 4pm.
Cost: Members: £110.00, Non Members £125.00, F1/F2/Trainees £90.00, Student £70.00

TEL – Creating innovative, fun and engaging online content: navigating the e-learning minefield - 14th July 2015

An ASME TEL (Technology Enhanced Learning) Workshop The development and use of online learning resources is not a new concept for many medical and healthcare professionals, yet creating sophisticated interactive resources can take time and technical skills and tends to be seen as the realm of specialist development teams. This workshop will introduce you to a range of easy to use tools and strategies for developing innovative, fun and engaging online content. Through a number of case studies involving collaborative models for e-learning resource development, you will be introduced to key concepts and knowledge and you will gain an understanding of the role that interactive e-learning resources can play in medical education and training. Aimed at anyone wishing to develop online learning resources, we will guide you through developing online content and e-learning activities as well as helping you find and critique existing resources available for you to embed within your teaching.

Workshop will run 10am-4pm.
Cost: Members: £110.00, Non Members £125.00, F1/F2/Trainees £90.00, Student £70.00

CMER – Conducting Medical Education Research - 14th July 2015

Medical education research can be challenging for those new to the specialty as it requires a way of thinking about research that may seem very different from one’s previous experiences. To help, ASME is running this workshop to support those embarking on a new project and to develop participants’ understanding of medical education research.

The workshop is run by very experienced researchers and designed for anyone who is thinking about or starting their first substantive study in medical/clinical education such as a Masters dissertation or a PhD or their first work-based education research project. In order to get the most out of the day, and help ensure everyone’s’ needs are addressed, all participants are asked to submit a brief synopsis of their research ideas no later than 4 weeks before the workshop. Your synopsis should be no more than a single page of A4 and include: your initial research goals (for example, overarching aims, research question etc), your motivation for conducting the study, and brief notes about the issues currently challenging you.

Workshop will run 10am - 4pm
Cost: Members: £110.00, Non Members £125.00, F1/F2/Trainees £90.00, Student £70.00

This stand-alone half day workshop is provided as a new option as part of the ASME Leadership and Management in Education programme.
This workshop provides teachers and trainers who seek to evidence their (faculty) development, an opportunity to focus-in on the leadership and management aspects of their educator portfolio. UK-based educators must be recognised (currently either provisionally or fully, from July 2016 only fully) by their responsible Education Organisation (Medical School, Postgraduate Deanery or LETB).

The workshop comprises interactive group activities, short presentations and individual exercises aimed towards gaining insight into how individual teachers and trainers can achieve and evidence their recognition with a specific focus on leadership and management as an educator.
Workshop will run 08.30am - 11.45am
Cost: Members: £55.00, Non Members £70.00
Intra-conference Workshops
Presenting Skills for New Presenters
Wednesday 16th July, 09.30-11.30am
Wallace Room

Rehearse your ASME Presentation – a personal development opportunity for the novice presenter

Presenting to a large audience at a national conference is challenging particularly for first timers – and we have all been there! Effective oral communication is a crucial skill for all health professionals, particularly those interested in research who need to explain their work to others. Often in the clinical environment when young clinicians rehearse their presentation their supervisors concentrate on the content and message of the presentation and overlook the personal style and communications skills of the presenter.

Very few people naturally possess outstanding presentation skills from the outset. Most presenters are anxious about their presentation skills and about handling any questions posed by the “expert” audience. However, practice and receiving specific feedback can improve performance. This workshop is aimed at those presenting this year at the ASME ASM who would like the opportunity to rehearse. It is expected that you will run through your presentation “in real time” and receive feedback from the panel and from the audience in true constructive educational style!

We are here to help and support you so that you can develop additional confidence in the delivery of your work prior to the “real thing”.

Workshop Objectives
1. Receive specific feedback and encouragement to enhance the “real” presentation.
2. Learn how your voice, physical presence and behaviour are received by the audience.
3. Improve confidence with audience interaction.

Educational Methods
Participants are invited to email Liz (liz.spencer@gmx.com) or Simon (s.gay@keele.ac.uk) prior to the ASM with their abstract to request a presentation slot.

It will not be possible for all who attend this workshop to be allocated a personal presentation slot (priority will be given to first time ASME presenters) but everyone will be able to sit-in, learn from those presenting, listen to their feedback and participate in the wider discussion. Each presenter will be allocated a total of 15 minutes for presentation and feedback from the panel and from peers. Written feedback will also be provided.

JASME Pathways Session
Wednesday 15th July, 9.30-11.30am
Drysdale Room

Medical education is a growing field with many opportunities for student involvement. These areas are not always easily identifiable to those new to medical education. This session aims to highlight the variety of opportunities available for medical students to get involved with medical education. The workshop will begin by considering ‘what is medical education?’ This will be followed by brief talks from; a medical student, Academic Foundation year doctor and Specialty trainee doctor, all with very different experiences and involvement in medical education. The session will be relaxed with plenty of activities and opportunity for discussion and questions. It is hoped that this workshop will help delegates to identify the various opportunities available and the importance of the portfolio to demonstrate their experiences in medical education and development as an educator.

The objectives include:
Knowledge:- To become aware of; what Medical Education entails, the various routes into and within Medical Education including academic posts, and the various research opportunities available as a medical student.
Attitudes:- To inform medical students of the various opportunities available that are not confined to the grounds of an academic post. These include the various teaching opportunities available and how to become involved in medical education in their own local institution.
Skills:- The group based discussion will encourage delegates to reflect on their experiences to date and develop ideas to enhance their involvement within medical education. In addition, the importance of maintaining a teaching portfolio will be discussed, along with methods for achieving this.
Thursday 16th July 2015, 11.10am to 1.00pm

1 Simulation Workshop - Developing a sustainable and resilient simulation centre
The ASPiH executive committee are delighted to have been invited to deliver a simulation based workshop at this year's ASME scientific meeting. This workshop will examine key findings from the ASPiH national simulation development project which examined how simulation is currently utilised in is intuitions across the United Kingdom. This workshop will take use key findings form this report as trigger tools for a series of highly interactive discussions.

Gillies & Paterson Rooms

2 ERG/NIHR Workshop - Funding for Medical Education
NIHR funding for Medical Education This workshop aims to introduce medical educationalists to the various funding opportunities offered by the National Institute for Health Research. The team from NIHR will describe the awards available, how to apply including advice on putting an application together, as well as the support given to recipients. Deadlines for submissions will also be covered. The second part of the workshop will be an open forum to discuss the personal interests of the audience.

Wallace Room

3 Assessment/Psychometrics - Understanding and using item-level metrics to improve the quality of single best answer question
Most academic and clinical staff have responsibility for and experience in creating written examination questions, particularly Single Beat Answer (SBA) and will have had training in this. This workshop, by analysing real data, aims to look in some depth at the metrics commonly obtained for each item/question, to understand what they mean in the context of a variety of questions and to consider how those questions can be improved as a result.

It will be of particular interest to those who review the results of written examinations, to decide if any questions need to be re-keyed or otherwise excluded from the results and which questions need to be reviewed before they can be reused.

Waddell Room

4 Writing for publication (Medical Education & The Clinical Teacher)
Writing for publication in health professions education is an essential skill necessary to develop an evidence base of practice. Such skill it essential for enabling the broad dissemination of one’s findings and raising the quality of health care education. Peer-review is a defining component of scholarly practice and, as such, proof of writing success is often a requirement for promotion and when applying for funding and evidence of professional impact. However, for both novice and experts alike writing for publication can be a challenging experience. The challenge may be increasing, in fact, as competition for publication is fierce and the standards in the field continue to rise.

In this workshop the editor of Medical Education, Kevin Eva and the co-editors of The Clinical Teacher, Jill Thistlethwaite and Michael Ross, join the journals’ editorial manager, Sue Symons to share their experiences and knowledge of the field of publishing. They will aim to provide authors (or potential authors) with a better understanding of what makes a good paper, where the common pitfalls lie with respect to writing and submitting papers, and what goes on ‘behind the scenes’ of the publication process. The potential benefits of unravelling some of the mysteries of the submission and review process include an increased understanding of what it takes to publish in medical education journals specifically and the scientific literature more broadly.

Workshop participants will be asked to consider the following questions and issues:
(1) What problems are commonly encountered
(2) What makes a good paper? Why do papers get accepted or rejected?
(3) What happens to a paper during the review process?
(4) Issues of style
(5) Ethical aspects of publication.

Ireland Room
5 ERG Workshop - Support for budding researchers
Are you thinking about or working on a research project and looking for some help or inspiration? The Education Research Group of ASME are offering surgeries for new researchers. At the session, you can bring your own specific questions or issues about your project to discuss with researchers with experience in different fields of educational research. Drop in and see if we can help.
Smith Room

6 JASME Workshop – Teaching and Simulation
Teaching is an important part of being a doctor, so it is important for medical students to have a chance to learn teaching skills. Simulation is a modality growing in prevalence in medical education and students may have limited opportunity to develop experience teaching using it. This informal, interactive session offers a very brief introduction to basic teaching theory, followed by small group sessions. Students in groups will design a short scenario to teach a basic skill or concept to the other members of the group using the simulator and receive feedback from their peers and experienced teachers who will facilitate the groups. The session uses a variety of transferable skills, making this interesting workshop an excellent opportunity to practice and receive extensive feedback on your teaching. All feedback is constructive and will help to improve your skills as well as confidence.
Mobile Skills Unit

7 TASME workshop - Developing your teaching & medical education portfolio
This workshop is aimed towards trainees and medical students who are interested in how to develop their teaching and medical education portfolio.

Working in small groups with facilitators from the TASME committee, this is an opportunity to discuss your experiences and ideas with peers - including reflecting on your achievements and experiences to date, how to maximise future teaching & educational opportunities, and tips and advice for formal educational roles such as teaching fellowships and postgraduate courses. Those at more advanced level, such as in teaching fellowships or pursuing medical education qualifications already, are also welcome to attend and have the opportunity to discuss project work and/or continuing professional development.
MacPherson Room

8 EDG workshop - Building Medical Education Momentum within your Organisation
The Educator Development Group of ASME will explain how educational momentum can be facilitated within different localities and workplaces: The workshop will help to enable participants to engender a sense of collegiality within their workplace and to help foster an environment where medical educators are developed and teacher effectiveness is improved at all levels of the educational continuum.
Davies Room

9 Teaching Case Presentation
This workshop uses real life audio examples of students presenting their work to peers as the backbone to explore how we teach this skill. It give workshop participants the opportunity to critique the students’ work, suggest new ways in which we could teach oral presentation skills differently, and shares with them the model developed in Sheffield based on FAIRness principles.
Scott Room
Cultures of Learning  
Thursday 16th July, 11.15am-1.00pm  
Thistle Suite

Dr Peter W Johnston - Consultant Pathologist / Associate Postgraduate Dean  
Pathology - Aberdeen Royal Infirmary

This session focuses on the postgraduate medical education. The need to educate doctors to improve the quality of clinical care in a changing healthcare environment is very evident and, at the same time, the pressures on postgraduate educators to train in the face of ever increasing service need is increasing. The UK Regulator, the General Medical Council, has announced new standards that recognise the value of people who educate others and the need to support learning in healthcare environments. The quality of the workplace culture of learning is central to the ability to teach and train along with systems to ensure quality is maintained and enhanced in a sustainable way to provide time and space to do so. The stresses and frustrations of those who educate are relevant in this picture and the session addresses aspects of resilience in the educator workforce. Keynote speakers are Dr Vicky Osgood, Director of Education and Standards, GMC and Prof Richard Canter, Professor of Medical Education, Oxford. The session will include workshop discussion aimed at identifying areas where work needs to be done to meet standards and how this can be achieved. The objective is to improve delegates’ knowledge and understanding of the new standards and to think about ways of meeting them whilst improving the quality of the experience of training for the trainer as well as the trainee.

Leadership Development Group Forum  
Thursday 16th July, 1.00-1.55pm  
Howie Room

The forum will take place over the lunch break on Thursday 16th July, please do feel free to take lunch into the room.

The LDG forum provides an opportunity for those interested in educational and clinical leadership, and leadership development, to meet some of the faculty and discuss topical issues in contemporary leadership. Following a short introduction about ASME’s leadership activities, the forum will be responsive to the needs of those attending and we aim to answer questions, stimulate debate and hopefully inspire you to get involved with our leadership development activities, either as a participant or as a trainer.

Education Research Group: Building Research Networks  
Thursday 16th July, 2.00-3.05pm  
Scott Room

Following on from the successful Building Networks workshop in November, ASME’s Education Research Group (ERG) is pleased to host a further network event at this year’s conference. You can hear about the work of the ERG in promoting research networks, have the opportunity to talk about your own research, and make connections with other medical educators who are interested in developing their research portfolio and making collaborative links with other researchers. The session is open to all levels of expertise and interests and will be highly interactive.

JASME Research Methods  
Thursday 16th July, 2.00-3.05pm  
Bannerman Room

This workshop is for any student or foundation doctor interested in evaluation or research in medical education. This workshop aims to introduce participants to principles of medical education research and foster an interest in medical education research. Participants will attend a number of interactive workshops on quantitative research, qualitative research, systematic reviews, and research ethics.
TASME Teaching Innovation and Excellence Award
Thursday 16th July, 2.00-3.05pm
Nelson Room

This is an annual prize offered by TASME to recognize talent, ingenuity and effort displayed by those embarking on a career in medical education. This year's finalist will be presenting in this session.

Meeting of MSc Course Lead/Programme Directors
Thursday 16th July, 2.00-3.05pm
Drysdale Room

ASME is hosting a session for Directors of academic programmes in medical education. This peer run session will provide a forum for participants to get to know each other and share ideas around programme standards, the nature of Masters Dissertations and the level of supervision support at this level of study, or perhaps to identify potential external examiners for courses.
The Mobile Skills Unit (MSU) is funded by NES and managed by the Clinical Skills Managed Educational Network (CS MEN) it has been in operation since January 2009 visiting multiple venues across Scotland. It’s core purpose is to support the delivery of clinical skills training and education to all healthcare practitioners, the emergency services and members of the public. The Unit provides a safe learning environment, part-task trainers and state of the art mid-fidelity simulation equipment (including SimMan, SimJunior and SimBaby) to allow a broad range of clinical skills education to be delivered.

*The MSU will be located within the South Car Park in BT Murrayfield throughout the conference.*

Please find below a timetable of all the sessions that will be taking place in the unit:

**Wednesday 15th July**

09.30-10.30 - Laerdal Workshop - What Drives your Educational Programs? Innovation, Inspiration or Sustainability?

11.00-14.30 - Practice your skills with Adam, Rouilly, Drop In session

15.05-16.05 - Laerdal Workshop - What Drives your Educational Programs? Innovation, Inspiration or Sustainability?

**Thursday 16th July**

11.10-13.00 - Intra Conference Workshop, JASME - Teaching and Simulation

14.00-15.00 - Laerdal Workshop - What Drives your Educational Programs? Innovation, Inspiration or Sustainability?

15.30-16.30 - Sports Medicine Team Organisation and Pitch-side skills, Dr Peter Johnston, ASME Executive Committee Member

16.45-17.45 - Laerdal Workshop - What Drives your Educational Programs? Innovation, Inspiration or Sustainability?

**Friday 17th July**

11.00-12.00 - Sports Medicine Team Organisation and Pitch-side skills, Dr Peter Johnston, ASME Executive Committee Member
Mobile Skills Unit Session Descriptors:

Laerdal Workshop- What Drives your Educational Programs? Innovation, Inspiration or Sustainability?

This highly interactive workshop will encourage delegates to interact with the three subject topics (Innovation, Inspiration and Sustainability) to determine what underpins the process of developing and implementing educational programs within their institution. Over the course of this workshop delegates will identify what policies, practices or social/political drivers inform which educational programs are implemented within their institution. Delegates will be given an insight into the functioning of the Laerdal Program Implementation Unit as they discuss the following topics:

Innovation: Are educational programs success focussed? How do institutions measure the impact that these programs have on the way learning is delivered and clinical practice
Inspiration: What underpins the development of educational programs? Educational theory, a clear business case or entrepreneurialism
Sustainability: How are educational program sustained over time? How does your institution ensure ongoing engagement, support faculty development and promote partnership working?

Practice your skills drop in session with Adam, Rouilly

Adam,Rouilly has been serving medical education worldwide for more than 97 years. Since 1918 we have supplied the very best in Skeletons, Anatomical Models and Skills Simulators to Hospitals, Medical Schools, Universities and Healthcare Professionals all over the world. Our Clinical Skills simulators assist in the teaching and learning of correct techniques for Intravenous Infusion, Phlebotomy, Catheterisation, and many other essential skills.

Drop into the Mobile Skills Unit to practise your skills on some of the manikins. You will have the opportunity to practise the following skills:-

- Catheterisation
- Injection and Cannulation
- Diagnosis of Eye Conditions
- Suturing
- Insertion of NG Tubes

We look forward to welcoming you.

Sports Medicine Team Organisation and Pitch-side skills, Dr Peter Johnston, ASME Executive Committee Member

Serious injury in sport is a rare occurrence however there remains the possibility of life-threatening and seriously disabling injury. Much of the effort in acute injury is towards preventing worsening of the situation and intervening to deter secondary injury. Best practice is based on available knowledge and skills, being aware of the human factors involved. Rehearsing "drills" regularly in the relevant environment helps develop technical and non-technical skills in preparation.

Using the facilities in NHS Education for Scotland's Clinical Skills Managed Educational Network Mobile Skills Unit, delegates are invited to develop skills they will need in the management of injured athletes. In Murrayfield, rugby will be the main focus and so this will involve primary survey leading to identification of mechanisms of injury. Techniques such as manual in-line stabilisation of the cervical spine, airway, breathing and circulation management will be addressed. The organisation of a team of people for pitch-side work will be discussed.

JASME Workshop – Teaching and Simulation

Teaching is an important part of being a doctor, so it is important for medical students to have a chance to learn teaching skills. Simulation is a modality growing in prevalence in medical education and students may have limited opportunity to develop experience teaching using it. This informal, interactive session offers a very brief introduction to basic teaching theory, followed by small group sessions. Students in groups will design a short scenario to teach a basic skill or concept to the other members of the group using the simulator and receive feedback from their peers and experienced teachers who will facilitate the groups. The session uses a variety of transferable skills, making this interesting workshop an excellent opportunity to practice and receive extensive feedback on your teaching. All feedback is constructive and will help to improve your skills as well as confidence.
What’s Hot in Learning & Teaching Innovations in Medical Education?
What’s Hot in Learning and Teaching Innovations in Medical Education?

Thursday 16th July 2015, 2.00pm – 3.10pm, Thistle Suite

This session will be a showcase for innovations in learning and teaching within medical education. The session will consist of four short presentations, with a Q&A session at the end of each presentation. The winners of the Educator Innovator Award will present their material, followed by two presentations selected from the abstracts submitted to the ASM as showing applied innovation with relevant evaluation.

Finally, the co-editors of The Clinical Teacher will give their views about ‘What is Inspirational and Innovative in Medical Education’

2.00 Welcome  
Dr Clive Gibson (Group Lead) & Dr Colin Macdougall (Deputy Group Lead)

2.05–2.25 Educator Innovator Award  
The Association for Elderly Medicine Education (AEME)  
James Fisher, Mark Garside, Kelly Hunt & Peter Brock, Newcastle, UK  
Q&A session

2.25–2.45 Abstract presentations from submissions (2 x 10 minutes each)  
Q&A session  
‘Student self-assessment, perceived workload and satisfaction with academic feedback: a multi-year study of over 500 students’  
David Hope, The University of Edinburgh  
‘Health numeracy in medical graduates’  
Anne Taylor, University Hospital North Midlands  
Session Chair: Dr Colin Macdougall & Dr Mark Lillicrap

2.45–3.05 What is Inspirational and Innovative in Medical Education?  
Professor Jill Thistlethwaite and Dr Michael Ross, Co-Editors, The Clinical Teacher

3.05–3.10 Panel discussion

3.10 Session close
This presentation will encourage you to reflect upon areas of medicine that you feel are undervalued or poorly taught, and demonstrate how those feelings empowered us to create the Association for Elderly Medicine Education (AEME) [aeme.org.uk]. AEME was founded in 2012 by a group of Geriatric Medicine trainees in the North of England who, as a response to a recruitment crisis in the specialty\(^1\), and against the backdrop of the Francis enquiry\(^2\), wanted to inspire, engage and empower junior colleagues to improve the standard of care for older patients.

You will hear about our first project, a national conference called ‘Geriatrics for Juniors’ (G4J) and how this addressed commonly encountered areas of Geriatric Medicine\(^3\). Concerns about the ‘med reg’ (medical registrar) role are commonly cited by junior doctors as a deterrent to application to higher training in hospital-based medical specialties\(^4\). We will discuss our attempts to address this problem at G4J and through CoTECast, our medical podcast series. We will describe how G4J has evolved into a regular, annual event, and also a template for smaller-scale regional events (‘G4J Connect’) that are run by local Geriatricians with an interest in medical education. We will argue that these events have huge potential as a scalable method to deliver teaching, disseminate best practice and to nurture enthusiasm for the specialty.

In addition, we will discuss our e-learning project; Mini-GEMs (Geriatrics E-learning Modules). These are free, open-access, video presentations hosted on YouTube and are loosely based on a presentation style called Pecha Kucha\(^5\). Mini-GEMs are designed to provide brief and succinct slideshows, usually around 7 minutes long, each with clearly stated learning outcomes. By minimising text and bullet points, encouraging the use of multimedia, and having a standardised format, we are hoping to respond to the way that the current generation of junior doctors consume electronic content. The aspiration is that Mini-GEMs will provide a repository of learning resources compatible with mobile devices. We will share preliminary data from an ongoing evaluation project that aims to explore how junior doctors employ Mini-GEMs as a learning resource.

To conclude, we will issue a ‘call to arms’ to fellow medical educators: find the topic area that you are passionate about or that you feel is neglected; collaborate, innovate and evaluate!

References
Student self-assessment, perceived workload and satisfaction with academic feedback: a multi-year study of over 500 students

D Hope, A Dewar, H Cameron
D Hope, Fellow in Medical Education, Centre for Medical Education, University of Edinburgh, Edinburgh, UK

Background and Purpose
Staff-to-student feedback is viewed as an important part of education, but research has demonstrated that feedback satisfaction scores can correlate poorly, or even negatively, with performance improvement [1-2]. Students undertaking medical education typically exhibit very poor self-assessment skills and can be inaccurate judges of their ability [3]. Combined, this suggests that students cannot use feedback to make improvements unless they are able to evaluate their performance accurately. This research examines over 500 undergraduate students to test whether students who are better able to judge their own ability are more satisfied with feedback or find it to be more useful.

Methodology
The Edinburgh Feedback Project delivers a large survey to first, third, and fifth year students of the Edinburgh MBChB programme every academic year. Questions cover demographics, personality, satisfaction with feedback, desired characteristics of feedback, and self-assessment of ability. We combined data over two years for a total sample size of over 500 students. The following variables were used in this study: the student’s self-predicted mark at the end of the year, their actual mark at the end of the year, their feedback satisfaction scores, their self-reported workload and their prediction of the average workload of a medical student in their year. We also calculated a “mark deviation” variable (self-predicted mark minus actual mark) and a “workload deviation” variable (self-reported workload minus predicted average workload of a medical student).

Results
We analysed associations between (a) self-predicted mark and actual mark, (b) feedback satisfaction and the two deviation variables, (c) whether self-predicted mark became more or less accurate in year 5 vs. year 3 and year 1 and (d) whether low deviations predicted feedback satisfaction. The capacity for self-assessment was typically poor, and some students considered themselves to be working substantially more than the average when that was not the case. While preliminary, feedback satisfaction appears linked to capacity for self-assessment, workload, and performance.

Discussion and Conclusions
The capacity to correctly self-assess performance, despite its perceived significance, remains poor, even where students are using past performance as a guide. Ensuring students are aware of their level of ability and expected workload may help them better gauge performance and allow them to better utilise feedback. Identifying why some students are good judges of their own performance may help promote that ability in others.

References
Health Numeracy in medical graduates

A Taylor, L Byrne-Davis
A Taylor, Undergraduate Hospital Dean, School of Medicine. Keele University, Staffordshire. England.

Background and Purpose
Health Numeracy (HN), the ability to use and interpret numerical data in a healthcare context, is a key skill for doctors. Research shows that some doctors have difficulty with drug dose calculations and medical data interpretation (1-8) threatening the delivery of safe patient care. There is no test of HN for medical graduates currently available, making it difficult to assess the extent of the problem. The authors have developed a new HN test for doctors, and describe its implementation in a cohort of Foundation trainees (FTs).

Methodology
The Medical Interpretation and Numeracy Test (MINT) is a 43-item test. It comprises 31 items previously validated in tests designed for various population groups including schoolchildren, patients and the general public, and third level students. In addition, 12 new questions were specifically written for doctors. FTs attending a teaching session on Risk Communication and Clinical Decision Making were invited to participate.

Results
Psychometrics show that the MINT is a good test of HN. 135 FTs took part. The mean score was 32.76/43 (76%) with a range of 14 – 42. FTs had difficulties with many aspects of numeracy, including questions involving drug dose calculations, converting between different numerical formats and simple probability concepts. Several also struggled with items comparing different treatment options, and with simple data interpretation questions based on interpretation of a nutritional label.

Discussion and Conclusions
Health numeracy is an important concept with significant implications for patient safety. The MINT is a valid measure of HN, and can be used to assess HN in doctors. Limited numeracy in doctors as evidenced by this and other studies is a matter that requires urgent attention in both undergraduate and postgraduate educational programmes.

References
Purple Sticker Initiative
The Purple Sticker

During this year’s ASM we are trialling a new (low-tech) innovation intended to extend the conversation of “Hot Topics” beyond the physical meeting.

During the chaired parallel sessions, chairs will be on the look-out for a “Hot Topic”. If one is discovered, the abstract/paper that engendered the discussion with will be marked by the chair with a Purple Sticker. At the end of the sessions, Purple Sticker abstracts/papers will be collected and collated.

At the end of the ASM, those abstracts/papers with a Purple Sticker will be highlighted in a blog post at Conversations in Medical Education (www.mededuconversations.com), the blog for the two journals, Medical Education and The Clinical Teacher, and ASME.

The e-Editor (Joshua Jacobs) will work with the journal Editors-in-Chief (Kevin Eva, Jill Thistlethwaite and Michael Ross) to identify and link relevant articles in the journals and will invite additional commentary from those who attended the session, those who were not able to be there in person, and the authors of the various abstracts/papers.

Sign up for notification of new posts at www.mededuconversations.com, and follow #asmeasm2015, #ClinTeachJ, #MedEdJ and please encourage you colleagues to do the same.

Thank you

Nicky Pender
CEO
ASME
## ASME Grants & Awards

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ASME Grants & Awards
Medical trainees' views on the transition from core training (senior house officer) to higher specialist training (registrar): how does this impact on their training and learning?

A Chu MBBS BSc MRCP FHEA MSc (MedEd)
A Chu, Clinical Teaching Fellow, Faculty Education Office, Charing Cross Campus’
ann.chu@imperial.ac.uk

Background & purpose:
The pathway from medical student to medical specialist (consultant) is often described as a continuum but in reality is composed of a number of stepwise transitions.¹

This interview study looks at the phase between core training and specialist training in physician specialties, from the perspective of medical trainees.

Methods:
This qualitative study was conducted in the spirit of interpretivism: an approach that recognises that “reality is subjective” and there are “multiple ways to interpret the reality”.²

An opportunistic sample of medical registrars from the KSS and London Deanery were interviewed (n=11) using a semi-structured approach. The focus was their experience of workplace and educational support when starting higher specialist training. The data was analysed using thematic analysis by a single researcher, with peer discussion for validation of ideas.

Results:
The variation in trainees’ stories highlights the heterogeneity of the medical registrar cohort. However, common themes emerged from the data that could be highlighted for educational intervention.

There was a complex combination of trainee factors, network factors and system factors, with areas of coherence and tension. Overarching these themes were the importance of time, and trainee perceptions of training and meaningful learning experiences.

Key ideas suggested that peer learning and mentoring are under-used avenues of support, falling outside the mainstream training experience. Core medical training was identified as a period full of potential opportunities to develop skills in leadership and decision-making that is currently not maximised. Time was a crucial part of the developmental process and trainees were critical of a system with so much tension between service and training.

Conclusions:
The cohort demonstrates that the real world experience of making the transition from core to higher training is a messy, complex and dynamic process, in which meaningful learning experiences are core to accelerating the transition period. This sociocultural perspective acknowledges that one size does not fit all – trainees will find meaning in some of these themes and not in others; the relevance of these themes to each trainees’ journeys will be individual.

However, the recognition of the interaction of trainee, system and network factors is significant - first, for realising that there is no single panacea and secondly, for realising the numerous possibilities for enhancing trainee experience in a positive manner.

Developing scholarship in early career researchers: insights from travelling fellowship to Canada

R Ajjawi
R Ajjawi, Senior Lecturer in Medical Education, Centre for Medical Education, Medical Education Institute, University of Dundee, Scotland

How we develop early career researchers is an important endeavour for academic medical educators, especially those who help to deliver research modules, Masters in Medical Education programmes and supervise PhD/MDs. Interestingly, there seems to be a need for a shift in conceptions of what medical education research is about from a positivist biomedical framing of ‘does this work’ to a more social scientific (or at least educational) framing of trying ‘to understand’ what is going on\(^1\). This has certainly been my experience working with clinicians new to educational research.

Funded by an ASME Educator Development Group travelling fellowship, I visited the Centre for Health Education Scholarship (CHES) at the University of British Columbia 17-23\(^{rd}\) November 2013. During my visit, I met with the CHES faculty and early career researchers to discuss scholarship and factors that promote its development.

Early career researchers at CHES discussed some of the challenges they faced in conducting educational research. For example, induction into a new language (e.g. educational jargon), desire to ‘diagnose and fix’ medical education problems, understanding philosophical frameworks within education and peers’ perceptions of the value of educational research. They spoke positively about the enabling environment including time for ‘productive wallowing’, open door policies and 1:1 discussions with faculty who tried to unearth the phenomenon being researched. The importance of conceptual frameworks in helping determine the research questions was also discussed.

In this talk, I will present a synthesis of various discussions and observations regarding developing scholarship, comparing and contrasting my experiences in the UK and Canadian settings and with integration of the literature.

References
Communication-related anxiety in undergraduate medical students

A Laidlaw, J Hunter, G Ozakinci
A Laidlaw, Principal Teaching Fellow Medical School, Co-director of the Centre for Higher Education Research, Population and Behavioural Health Sciences, Medical and Biological Sciences Building, University of St Andrews, North Haugh, St Andrews

Communication training and assessments can provoke anxiety in medical undergraduates[1, 2]. A quarter of students experiencing academic difficulties express problems approaching patients[3]. However, our recent work showed that medical students were reticent to take part in workshops focussed on providing coping skills for communication-related anxiety due to stigma associated with admitting to experiencing anxiety[4]. It may be that medical students are utilising less useful coping strategies like increased alcohol consumption[5], rather than seeking help. Doctors are also less likely to seek help for mental wellbeing difficulties in comparison to other working populations[6]. To develop acceptable support for medical students we need a greater understanding of student experiences of and their attitudes towards communication-related anxiety and stress.

Semi-structured interviews were carried out with medical students (n = 17) across UK Medical Schools to explore their experiences with communication-related anxiety and stress as well as their coping and help seeking behaviours. Interviews were audio recorded, transcribed and thematically analysed[7].

Sources of communication-related anxiety included several aspects of working with simulated patients; such as acting, performing in front of others, and increased communication challenge. Whilst speaking with real patient’s sources of stress included; patient and student’s distress and the perception they were bothering patients by asking to speak with them. Sources of general stress included feeling they had to perform even if tired or stressed, feeling out of their depth, and worry about competency.

Coping strategies for communication-related anxiety included; ignoring observers, a time out to discuss with peers or tutors within a workshop, moving the interaction on to a topic they felt more comfortable with or seeking a comfort in the fact that others struggled too. Few participants reported seeking help for such anxiety out with workshop situations. For general stress, participants noted that, as they had been aware of this before starting the course, admitting they were experiencing difficulty would signal their inability to cope with the career. Thus anxiety could be admitted to peers for very specific course-related stress, such as exams but not for more general stress. Participants reported awareness of institutional support systems, often a named member of medical school staff, but variability in this relationship could leave some students reluctant to approach them for assistance.

Understanding the sources of anxiety and the reluctance to seek support for anxiety will assist in developing an environment where students are willing to seek help when required.

Peers Teaching: What motivates students to engage?

PJ Quinn, EL Rees, B Davies, V Wass
P J Quinn, Keele Medical Education Society, School of Medicine, Keele University, Staffordshire, ST5 5BG, UK

Background
Defined as ‘an educational arrangement in which one student teaches one or more fellow students’ peer teaching is widespread in undergraduate medical education. Medical students have reported peer teaching as an acceptable pedagogical method and objective benefits in knowledge and skills have been demonstrated. Beyond benefits to learners, evidence also highlights the use of peer teaching as a learning adjunct for the tutor, with those engaging in peer teaching scoring higher in assessments than their non-teaching colleagues. However, to date, little qualitative work has focused on students’ experiences of peer teaching and their reasons for engaging. This study aimed to explore students’ motivations for delivering and attending peer teaching.

Methods
At Keele, peer teaching occurs informally across the years. Through purposive sampling, students who had participated as tutors or learners in peer teaching were invited to attend a focus group. The focus groups were conducted by one medical student peer (PQ), with a second (ER) making notes. The focus groups were semi-structured following a topic guide developed with reference to the literature. Groups were audio-recorded and transcribed verbatim. Two researchers (PQ,BD) independently analysed the transcripts through thematic analysis generating themes inductively from the data. Following discussion with the research group, a final coding framework was produced. This study received approval from Keele University School of Medicine Ethics Committee.

Results
Four focus groups were conducted with a total of 24 students from first through to fourth year. Students attending peer teaching described using sessions as a guide to what to learn for assessments. Learners felt that, having recently passed the exams themselves, their peer tutors were well placed to give guidance on assessments, including an indication of the depth and breadth of knowledge required. Learners also felt a lack of professional hierarchy within sessions, allowing them to more freely express concerns. For tutors, drivers for engagement in teaching included a sense of duty to their colleagues, a desire to learn through teaching, wanting to develop teaching skills and the acquisition of evidence of involvement in teaching. For both learner and tutor, a safe environment in which to recap and reinforce knowledge made peer teaching an attractive activity.

Conclusions
A number of factors influence students’ decision to participate in peer teaching. Students perceive peer teaching to be an effective means of learning for both tutors and learners. Like other areas of student learning, peer teaching appears to be driven by assessment.

References
1. Ten Cate O, and Durning S. Dimensions and psychology of peer teaching in medical education. Medical Teacher. 2007; 29: 546-552
The Clinical Teacher Travelling Fellowship 2014

Development of high-level Interprofessional Education leadership skills by means of collaboration between Newcastle University, UK and Griffith University, Australia

A Teodorczuk
A Teodorczuk, Consultant Psychiatrist and Honorary Senior Lecturer in Medical Education, School of Medical Education, Newcastle University, England

Background
In the modern world, patient complexity is rising as a consequence of the ageing population (1). This necessitates high level collaborative clinical practice. Previously, by means of a Grounded Theory study (2), we researched healthcare professional’s practice gaps in relation to managing confused older patients. From this we developed an effective formal interprofessional education (IPE) post qualification course (3). However two unmet needs remain. Firstly, a need to promote such interprofessional learning processes sooner at pre-qualifying level. This will help earlier negotiation of professional identity. Secondly, a need to study other informal approaches to improving effective work place pedagogy and practice concerning the older confused patient (4).

Purpose of the fellowship
The purpose of the Clinical Teacher Fellowship is to: 1) Develop high level Undergraduate IPE skills by learning from Griffith University, a centre of IPE excellence. 2) By working closely with Professor Billett develop a proposal which builds on the previous Grounded Theory study and further research effective informal workplace pedagogical processes.

The project
The Fellowship will be undertaken between March and April 2015. Time will be spent learning about the Griffith IPE processes. These are based on the WHO Framework for Action on Interprofessional Education and Collaborative Practice. Specifically this will involve observing the Griffith University Clinical Learning through Extended Immersion in Medical Simulation (CLEIMS) IPE teaching. In addition IPE best practice will be shared by means of seminars and co-facilitating an accepted workshop at the ANZAHPE/AMEA 2015 Annual congress, Newcastle, Australia, which coincides with the visit. Additional outputs include developing a Call for Action for greater IPE in Geriatric Undergraduate curricula.

To address the second aim a dialogue forum on learning through practice in health care settings will be undertaken that will include considerations of co-working and learning through interprofessional practice. A sound research plan to continue a program of research will be developed.

Results and discussion
Key outputs at personal and organisational level from the Fellowship and evidence of sustained impact will be presented. As Newcastle University are undergoing a MBBS curriculum review there is opportunity for change and the project is especially timely. The research proposal and influences of the visit on its development will also be outlined. Accordingly, the Clinical Teacher Fellowship, focused on promoting high level IPE and researching informal workplace learning opportunities, will underpin a scholarly approach to help prepare educators meet the needs of the ageing population.

References
A Long-Term, Sustainable, Inclusive, International Model for Facilitating Junior Doctor and Medical Student–led Publishing

Z Qureshi
Z Qureshi. Academic Clinical Fellow (International Child Health). Great Ormond Street/University College London, UCL.

Background and Purpose
Medical textbooks are predominantly written by senior clinicians with a vast wealth of experience in both delivering teaching and practising medicine. This model has been very successful, but arguably has left the potential contribution of “juniors” (medical students and junior doctors) untapped. There is evidence in the literature suggesting that juniors can be effective medical teachers. They are able to use their recent experience of being learners to relate to current students. This experience can help such teachers identify and address the changing learning needs of students. Several small studies have suggested that junior-led teaching is effective, even when being compared with that delivered by more senior staff. It may have advantages such as the approachability of the tutors and their enthusiasm and drive to organize and deliver teaching. However, such research has not been conducted in the field of medical textbook writing, and juniors have had a relatively small role as textbook authors until recently. We hypothesized that similar advantages of junior-led teaching may apply to textbook writing.

Methodology
The Unofficial Guide to Medicine project was conceived as a new approach to developing and publishing textbooks for medical students that put juniors at the forefront of every aspect of the publishing company. The textbooks were not designed to be used in isolation, but rather to complement the core medical school curriculum and senior doctor-led teaching.

Results
The first textbook, The Unofficial Guide to Passing OSCEs, involved 37 juniors, with 38 experts involved to ensure factual integrity. Six further titles have now been released. The books have been positively reviewed in medical journals (e.g. International Journal of Clinical Skills), have been added to national curriculums (e.g. The Unofficial Guide to Radiology is endorsed by the Royal College of Radiologists in the UK), and have won awards (e.g. the British Institute of Radiology/Philips Trainee Award for Excellence). Participation in the project has had a positive impact on professional development. The greatest improvement reported by authors has been in the ability to explain complex ideas simply, but other suggested benefits include improved clinical skills/knowledge, and improved understanding of plagiarism/copyright legislation. Contributors describe benefits for themselves such as “developing their ability to communicate complex ideas”, and having “an opportunity to gain an extraordinary sense of achievement, and reach students not just on your ward, but also in other countries”.

Discussion and Conclusions
Medical students and junior doctors are a motivated, hardworking group, capable of significantly adding to the medical textbook library. A junior-led publishing network has been set up with the capacity to expand and accommodate new ideas, while ensuring accuracy is maintained with expert review. Juniors involved are benefiting in terms of their professional development, as well as providing textbooks valued by current learners.
Joint ASME/GMC Excellent Medical Education Award 2015

The “Excellent Medical Education” Programme is a set of national prizes established jointly by ASME and the GMC to fund high quality medical education research, development and innovation.

This is in response to recognition of the need for further research-based evidence related to medical education and training, through supporting capacity building and increasing the volume of high quality medical education research. All ASME members who are based in the UK were eligible to apply, provided their organisation is capable of fulfilling the role of a research sponsor (e.g. an NHS organisation, academic institution).

ASME and the GMC do not intend to name specific topic areas and welcome applications on a wide range of issues, across the continuum of medical education:

- Undergraduate
- Postgraduate
- Continuing Professional Development.

Three awards have been made, one linked to each of these stages of medical education. The programme is intended to support research which is related to the innovation, development, implementation and sustainability of excellent medical education which has an impact at either the individual. We are delighted to report the three winning submissions will be presented at this year’s ASM.
Educational development in context: Developing a regional community of practice (CoP) in Psychiatry

M Moffat, I Cameron, D Bennett
M Moffat, Lecturer in Medical Education, Division of Medical and Dental Education, University of Aberdeen, Scotland

Background and Purpose
Developing and supporting educators is an ongoing endeavour(1) and can be challenging in busy clinical environments in departments that are geographically spread across different health boards. Using a ‘Communities of Practice’ (CoP) framework (2), we hope to overcome some of these challenges and provide more effective support for those involved in teaching our medical students. Using a pre-existing network of enthusiasts, we wish to develop and evaluate the usefulness of a Psychiatry CoP to support and deliver educationally-focused CPD activities and workshops. The current project aims to explore, understand and inform the development of this CoP and pinpoint transferable messages which could be used in other contexts (e.g. in other specialties).

Methodology
This is a participatory action research (PAR) project, grounding research in real community needs and learning (3,4). The collaborative process will focus on a number of phases including relationship building, problem diagnosis, action intervention planning and reflective learning. Data will be collected from a variety of sources and will include semi-structured interviews, notes, meeting minutes and evaluation forms. Analysis will be inductive and ongoing, exploring the processes and informing changes occurring throughout the period of development.

Results
Results from the project will be presented after the evaluation of the planned CPD activity takes place and data collection has come to an end for this phase of the CoP development (CPD activity planned for August 2015).

Discussion and Conclusions
Using a PAR approach, we hope to explore how best to develop communities of educators, effectively supporting these individuals and increase communication across healthcare/education and training delivery centres; develop shared teaching and education resources and improved support.

References
Joint ASME/GMC Excellent Medical Education Award 2015
Postgraduate Category

An investigation into Specialty Trainee engagement with e-learning in Health Education North West (HENW)

JM Brown¹, NJ Shaw², S Agius³, J Hayden⁴

¹ Reader, Postgraduate Medical Institute, Edge Hill University
² Professor, Evidence-based Practice Research Centre, Edge Hill University
³ Senior Research Fellow, HENW
⁴ Dean of Postgraduate Medical Studies, HENW

Background and Purpose
Cook and Triola’s recent dialogue in ‘Medical Education’ ‘What is the role of e-learning? Looking past the hype’ highlights the massive increase in technology enhanced learning and how research is not keeping up with the pace needed to provide the necessary evidence on its impact on medical education practice. This study to be undertaken over the next 6 months will investigate how Paediatric Specialty Trainees (PSTs) in HENW engage with e-learning before assessing the quality of the identified online applications.

Aims and objective
The objective is to provide an assessment of the e-learning resources that are being utilised and valued by PSTs in HENW. It is important that Specialty Schools and their trainees are provided with guidance on e-learning packages and whether they are likely to be beneficial for them. This is especially the case when it is notoriously difficult to assess the cost effectiveness of medical education interventions. This study therefore has specific aims:

To determine PSTs' engagement with e-Learning in HENW.
To determine the characteristics of e-learning that are accessed or used most frequently.
To assess the quality of the web interfaces being used.
To determine if e-learning that is available aligns with the best evidence for its provision.

Research questions and methods
This mixed methods study will be progressed in 2 phases to answer the following research questions:

How do PSTs engage with e-learning?
To what extent do PSTs feel engagement with e-learning contributes to their Specialty Training?
What are the characteristics that PSTs feel contribute to a valued e-learning package?

Phase 1 – A scoping exercise will be undertaken to gather from 420 PSTs the e-learning packages that they use and value. An online questionnaire with open and closed questions will be utilised. All of the packages reported will be categorised according to specialty and assessed for transparency of the website according to Jacobs. Each package will also be assessed against the Department of Health’s Framework for Technology Enhanced Learning. Each e-learning package will be categorised against the proforma criteria.

Phase 2 – after analysis in Phase 1, 15 semi-structured interviews will be undertaken with HENW Paediatric STs to investigate how they engage with e-learning and how much value and emphasis they place on it in terms of their postgraduate training.

Dissemination
A model to undertake scoping exercises in other Specialties will be disseminated at the end of the study.

References
Joint ASME/GMC Excellent Medical Education Award 2015
Undergraduate Category

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

J Lefroy, R McKinley, R Kinston, S Gay, S McBain, S Yardley
Keele University

The current GP workforce and recruitment crisis prompted us to question how junior doctors decide on their training posts and why the proportion choosing General Practice is far short of the 50% Health Education England target. Career intentions of future doctors begin to form in medical school but differ substantially between schools. The reasons for differences are complex but may be due to curricular differences: Hastings, Nicholson and McKinley have reported findings that suggest the provision of high quality authentic placements during which students engage with clinical activity is a major attractor to a speciality.1

At Keele University School of Medicine students spend a total of 23 weeks in General Practice placements including a 15 week assistantship in the final year. Although this GP assistantship is a departure from the norm, it is intended to be generic preparation for practice in both hospital and primary care. As “learning-on-the-job”, it is supported by the General Medical Council (GMC). There is great interest within and outside Keele regarding the outcomes of such a curriculum, in terms of Keele graduates performance as junior doctors and with respect to their eventual career paths.

We have routinely surveyed students about career intentions since Year 4 of the new Keele curriculum (2010-11). 29.4% of responding graduates intended to go into GP on the exit survey of 2012-13 and 29.7% in 2013-14, but these intentions were tentative for many.

In addition we are currently conducting a study to develop greater understanding of the transition from final year medical student to qualified doctor through the application of ethnographic methods to investigate three stages of transition: Anticipation – Taking responsibility – Reflecting after the transition. This study has involved a cohort of Keele students who have been followed through their transition to FY.

With the ASME/GMC Excellent Medical Education award we will extend this study with the same cohort and their colleagues from other medical schools working in the same foundation schools as them, to explore:

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

In using realist evaluation we aim to understand the influence of context (focusing on placement experiences and memorable formative incidents), on career choices at FY2, and the mechanisms by which the educational environment may shape these career choices.

Sir John Ellis Student Prize 2015  
Special Study Module Category

King’s College London MBBS 2020 Curriculum review

R Sethi, S Carney
R Sethi, Kings College

Background
King’s College London (KCL) is developing a new MBBS curriculum for launch in 2016. To inform this work, we looked at preparation for practice and the transition from medical student to foundation doctor as part of a student-selected component.

Aims
This project considered the following questions as part of the MBBS curriculum review:

- What are the benefits and risks of bringing forward the timing of finals at KCL?
- How should medical students be prepared for practice?

Methods
To address these questions, I used a mixed methods approach. I reviewed the literature, contacted senior medical students at UK medical schools to complete an on-line data capture (DC) and looked at the relationship between timing of finals and perceived preparation for practice. Data fields included: timing and structure of final assessment, availability of re-sits, and timing and structure of any preparation for practice modules. Google Drive was used for the data capture. Data from the GMC State of Medical Education 2014 report was combined with the timing of finals to explore if there was an association between when finals are set and self-reported preparedness for practice. A medical education twitter chat was held on topics including how to improve the transition from student to foundation doctor and whether timing of finals affects preparedness of foundation doctors.

Results
Data was received from at least 28 UK medical schools (>90%). Most schools have a discrete preparation for practice module towards the end of final year including topics such as patient safety and prescribing skills. On-line DC analysis of 20 medical schools shows no statistically significant association between exam-free time and self-reported preparation for practice (p value: 0.5337). Literature review and twitter chat findings emphasise medical students value clinical experiences and doctors in training cite out-of-hours work as useful opportunities.

Conclusions
No link was found between when finals are set and self-reported preparedness for practice of foundation doctors. One may expect with earlier finals, students would be better prepared but the data did not support this hypothesis, nor did earlier finals disadvantage students. However, earlier finals allow students to resit in-year and continue to the Foundation Programme. Many schools have developed a discrete module after their final examinations. Importantly, with earlier finals, students can make the most of the clinical experience available to them without the worry of examinations. KCL has decided to bring forward the timing of finals to December/January from May to allow time for resits in year.
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Interprofessional simulation (IPS) to promote positive attitudinal change towards patients with mental health needs

Exploring the nature of interprofessional education (IPE) provided in education and training programmes in the United Kingdom

Peer Observed Interprofessional Simulation for Medical Students and Nursing Students

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Patient Feedback in Clinical Exams

Introducing Patient and Public Involvement to the selection of medical students, quality processes and governance of a Medical School

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Factors Influencing Recruitment and Retention of Foundation Doctors in geographically unpopular locations

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Threshold Concepts in Geriatric Medicine.

I S A Wilkinson
I S A Wilkinson, Medicine for the Elderly, Surrey and Sussex Healthcare NHS Trust, Canada Avenue, Redhill, Surrey. RH1 5RH

Background
Elderly patients make up the largest proportion of patients in UK acute hospitals; as our population ages this will increase. To manage such patients requires a unique skill set, yet many are looked after by non-specialists. Recent controversies have shown that at times the care elderly patients receive can be lacking. Threshold Concepts (TCs) represent a novel educational theory (1) which has, as yet, not been explored fully in medical education. TCs have been described as ‘jewels in the curriculum’ and are key concepts in becoming an expert in a given field of education. TCs are classically, troublesome, transformative, integrative and irreversible. They may seem counter-intuitive to the learner, but the eventual grasping of a TC always leads to an ontological shift in the learner. TCs help explain how and why a geriatrician views their patients as they do and thus may identify the key concepts to teach others to ensure good quality care is delivered to elderly patients in our hospitals.

Concept mapping provides a means of visualising learning structure and it has been proposed that grasping a TC forces a change from a linear chain like structure to a more networked structure of thinking (2).

Method
This study is a qualitative study of trainers and trainees of different levels. It uses the method proposed by Cousin (3) to identify TCs. Semi-structured interviews were conducted with 12 consultant geriatricians and a thematic analysis of these was used to create a structured questionnaire which was delivered to 17 trainees in medicine. Concept mapping was used to visualise the connections between concepts, looking for those that lead to a networked mode of thinking. These were then thematically analysed to derive the 2 proposed TCs.

Results
The study shows that whilst there are a number of troublesome areas in geriatric medicine training two concepts stood out as TCs. Firstly the appreciation of the complexity of older patients (encompassing ‘frailty’, the importance of interrelated comorbid conditions and/or medications) and secondly a ‘new’ concept of maternalistic ‘care’. This links to the TC of ‘care’ found in some allied professions (4).

Implications
Identification of TCs prompts an analysis of postgraduate medical curriculums to ensure these areas are covered. It allows for a focus on these areas in educational supervision to ensure they are reflected on and thought about by all doctors who look after our elderly.

A poor understanding of assessment and feedback makes it harder for students to propose improvements to feedback.

F Mahmood, D Hope, H Cameron
F Mahmood fahdmahmood@hotmail.com

Background
Feedback has a significant influence on student achievement(1). We explored student views regarding feedback through the Edinburgh Feedback Inventory – a questionnaire review of student perspectives. The survey collected data from 750 students over two academic years, in the first, third and fifth year of an MBChB programme.

Methods
We employed a phenomenology based qualitative approach to consider students’ free text answers to questions on positive and negative aspects of feedback. Local ethical approval was obtained. Data collection was performed through a Virtual Learning Environment. 50% of the 750 eligible students provided responses. Line by line coding was undertaken.

Results
Twelve themes were identified, with little consistency evident. We identified academic themes in relation to lack of detail, consistency, individualisation and direction. Practical themes included lack of time, interactivity and quantity as well as reasons for limitations. Other themes were exams, need for support and positive responses. Data was collated on differences between year groups – first years made the majority of positive responses, whilst years 3 and 5 were largely responsible for themes relating to lack of detail, feedback and tutor availability. We also explored whether students identified an effect of feedback and suggestions for improvement.

Discussion
Suggestions for improvement included educating students about feedback provision and providing more positive feedback. More difficult suggestions included decreasing group sizes, increasing the number of assessments and universal access to a tutor for feedback. Year 5 students sought more input than junior colleagues, perhaps reflecting impending final exams. No year 5 students praised quantity of feedback, with most such comments coming from year 1, perhaps reflecting their relative ‘inexperience.’ Comments offered minimal insight into the effect of feedback on academic performance, though it was evident that it was considered important. Some alluded to lack of positive feedback impacting negatively on their performance through decreased motivation. Many used the questionnaire to criticise perceived unfair marking, suggesting a fixation with grades. We have investigated in significant detail the facets of feedback students deem important and why they ascribe this importance. We reveal a lack of understanding with regard to how feedback delivery occurs, with a varied understanding of feedback itself, along with either ignorance or indifference towards resource constraints. Attempts to improve academic feedback can only use students’ perspectives if students not only have an accurate understanding of feedback but also the environment and pressures within which it is delivered.

References
Interdimensional Travel: Student partner approaches for design and evaluation of artistic methods for skill development in reciprocal transitions in understanding between 3D anatomical structures and 2D clinical images.

M Backhouse, M Fitzpatrick, J Hutchinson, J Selwyn-Gotha, G Suthermanraj, CS Thandi, A Tiri, R Allen, ID Keenan.
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Background and Purpose
High standards of competency in anatomical knowledge and the ability to interpret clinical images are essential requirements for doctors. We propose that the reciprocal transition in understanding between three-dimensional anatomical structures and two-dimensional clinical images can be an important threshold concept for many medical students. While the illustrations of Leonardo da Vinci in the 16th century are well-known examples of the use of artistic methods in anatomy education, it has been proposed that clay modelling was used by Mesopotamians as long ago as 2000 BC for the purposes of demonstrating liver anatomy to students. More recently it has been proposed that utilising artistic techniques can enhance student learning of anatomy. Students take a variety of approaches to learning including visualisation and visual and kinaesthetic artistic techniques are known to improve learning but few studies have investigated artistic modelling in anatomy education. We hypothesise that incorporating artistic techniques combined with established educational methods in anatomy teaching sessions can improve skill development in understanding of three-dimensional anatomy and interpretation of clinical images.

Methodology
Having identified a shortage of project opportunities for undergraduate students in anatomy and medical education, we have utilised student partner approaches whereby undergraduate medical students have been closely involved in the design, development and evaluation of our artistic learning methods in transdisciplinary collaboration with a professional artist. Student partners have designed novel drawing and modelling learning processes in order to enhance anatomy student learning and experience. We have carried out mixed-method approaches incorporating cross-over randomised controlled trials, survey questionnaires and student interviews in order to triangulate the value of our techniques.

Results and Conclusions
Our observations indicate that a high proportion of medical students possess previous artistic qualifications and utilise artistic methods when studying and revising anatomy. Our data indicate that our novel techniques can be valuable for enhancing student development, learning and experience of both project student partners and anatomy students. This work was part-funded by Newcastle University Institute of Creative Arts Practice (NICA).

References
SimPharm – a novel approach to integrated pharmacology teaching for year two medical students.

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Background and purpose
Medical students frequently report pharmacology and use of medicines as an area in which they lack confidence and require educational improvement\(^1\). High fidelity simulation has been shown to be an effective method of teaching\(^2\) and patient simulators have been used successfully to teach medical students\(^3\). This project aims to improve a student’s knowledge and understanding of pharmacology by providing novel integrated sessions using high fidelity simulated clinical environments.

Methodology
A series of clinical cases are used to demonstrate, and prompt discussion about, the action of therapeutic drugs. The sessions are delivered to the whole of year two in a lecture theatre setting. The ‘patient’ is an actor and their observations (heart rate, blood pressure, respiratory rate, saturations, temperature) are displayed on a monitor screen in ‘real time’. The students are then taken through a series of medical scenarios, the ‘live’ parameters change depending on disease states and administered medicines, time is spent looking at the underlying pharmacology and their understanding is constantly assessed using single best answer style questions and the live voting system, Turning Point. As this is an integrated experience the relevant anatomy, biochemistry, microbiology and physiology are also discussed. These sessions compliment the traditional lecture based pharmacology teaching and aims to provide a highly interactive environment where the students bring together different aspects of the syllabus and apply them clinically.

Results
One session has been delivered in the student’s first consolidation, integration and feedback (CIF) week, and two more sessions are time tabled for the upcoming CIF weeks later in the year.

Discussion and conclusion
We will present our experiences designing and delivering these sessions. We shall also present a student evaluation, which will consist of questionnaire and focus group qualitative data of the medical student experience.

References
Inspiring Future Surgeons – The Art of Anatomy

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Background and Purpose
In surgery, art and science are interdependent and surgeons use their creativity to solve problems. Surgeons and artists both require skills of observation, critical thinking, dexterity and accuracy. Art and anatomy have an enduring relationship that can be traced back to the Renaissance with Da Vinci and Vesalius. Our pilot study aimed to inspire medical students to consider a career in surgery by teaching clinical anatomy using art.

Methodology
The course consisted of four 2.5-hour sessions. Local surgeons delivered short lectures on clinically relevant anatomy, followed by teaching using dissected specimens. Students had input from a local artist and produced a piece of art demonstrating the anatomy they were studying. Media included body paint, clay and charcoal sketching. Students completed pre- and post-course questionnaires; data were analysed using SPSS 18.0.

Results
All students (n=63) reported that the session was enjoyable and that they would recommend the course to their peers; 94% felt it had improved their knowledge of anatomy and 98% found the session useful. After the course 97% of students intended to use art to learn anatomy, whereas only 56% had used art to study anatomy prior to the course. The number of students who strongly agreed with the statement "I enjoy anatomy" significantly increased from 41% to 60% (p<0.05 \( \chi^2 \) for trend). Prior to the course 15% of attendees strongly agreed with the statement "I am considering a career in surgery"; this increased significantly to 41% of students after the session (p<0.05 \( \chi^2 \) for trend). One student observed: "understanding the clinical relevance before the (art) session brings the anatomy to life...".

Discussion and Conclusions
Using art in anatomy education is feasible and proved popular. Teaching clinical anatomy using art engages students and may encourage them to consider a career in surgery. Art and anatomy classes are enjoyable and may be used to supplement conventional teaching methods.
Self-Regulatory skills and Laboratory performance: an exploratory study in 1st year Medical students

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Background and Purpose
Self-regulated Learning (SRL) is a cyclical meta-cognitive process through which individuals proactively generate and use feedback about their learning. Highly self-regulated learners consistently perform better at tasks in several domains. Typically, self-regulated individuals’ reflections on a task, focus on the strategy and processes to achieve an outcome, rather than the outcome itself. In one UK study, less self-regulatory medical students showed increased difficulties in a simulated venipuncture task \(^1\). The goal of this exploratory study was to evaluate SRL processes in 1st year medical important for learning laboratory procedures, and evaluate possible relations between SR profiles and performance in the tasks. The study further intended to appraise the applicability of the SRL Microanalysis model when assessing performance in laboratory context.

Methods
A purposeful sampling method was used to identify first year medical students who were top and bottom performers in the first laboratory skills exam in medical school, in one medical school in Portugal. The task consists of performing a dilution of a solution using micropipettes. It comprises two steps, one consisting of a calculation of the dilution and the other is the performance of the dilution per se. A Microanalysis protocol is being applied to measure Strategic Planning, Goal Setting, Metacognitive Monitoring, Self-Evaluative Standards, Satisfaction and Attributions during a laboratory task. All interviews were audio-recorded and fully transcribed.

Results
So far, 19 students took part in the study. Overall, students who performed well in the task showed higher strategic thinking on all measures applied. In contrast, students that struggled with the task focused on the outcome of the task – having the “correct” volume and/or dilution - and were less concern with reflecting about the processes. The Microanalysis protocol is providing itself useful to identify relevant self-regulatory differences between top and low performers.

Discussion
A previous study conducted with 3rd year medical students in the UK had shown that students who had difficulties in a venipuncture task were did not have sophisticated SRL skills also. Our results are rendering further support to the idea that Self-regulation is a key aspect in helping or hindering the learning of skills by medical students \(^2\). SRL-Microanalysis is making possible to identify areas in which students might benefit from feedback.

References
Less is more! What anatomical knowledge medical students really need to know?

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Background and Purpose
Teaching anatomy in modern medical curriculum is challenging. Tutors cite insufficient time to cover the breadth and volume of material required\(^1\). The need to identify appropriate anatomy learning outcomes is therefore critically important yet there is little empirical evidence to support this process. The task may be especially difficult for educators who have come through a science rather than a clinical training route.

We decided to review our anatomy curriculum derived from the Anatomical Society of Great Britain and Ireland\(^2\), to ensure the learning outcomes delivered in Year 1 and 2 of the medical programme supports students to learn in their clinical years and ultimately prepares them to work as junior doctors.

Methods
Ten junior doctors undertook card sorting exercises to identify the learning outcomes from the anatomy curriculum that they had applied in their early clinical practice. Then eight senior clinicians from mixed hospital specialties reviewed the learning outcomes that junior doctors said they hadn’t used and debated whether they were needed in the undergraduate curriculum.

Partnerships of doctors and biomedical scientists were formed to work with the findings and modify teaching activities. The impact of the changes made were evaluated using questionnaires pre and post intervention that considered whether learning activities met the student needs and were relevant to their future role as a doctor. Clinical teachers’ perceptions of the students’ preparedness for clinical learning were also assessed.

Results
One hundred and sixty six of 227 (73%) anatomy learning outcomes had been used by junior doctors in their first year of clinical practice. Of the 27% that junior doctors said they had not used, 10% were deemed unnecessary for undergraduate education by senior clinicians, either because they involved specialist knowledge or represented knowledge that was not required by a doctor.

The clinical/science partnerships reviewed 72h of anatomy teaching and focused upon delivering learning at the appropriate level of depth, contextualised by common clinical conditions and appropriate clinical testing and management. Questionnaire data from before and after the changes will be presented.

Discussion and conclusions
Anatomy in the early years must be relevant and contextualised. Over detailed learning outcomes may impact on the student’s ability to build on their learning in a clinical environment. An empirical approach and clinician-science partnerships have delivered change in our anatomy curriculum.

1. Regan de Bere S, Mattick K. 2010. from anatomical competence to complex capability. The views and experiences of UK tutors on how we should teach anatomy to medical students. Adv in Health Sci Educ. 573-585
Dissecting the dilemma of the dichotomy between the clinicians and students perspectives of formal anatomy teaching

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Background and purpose
Anatomy is a natural part of the medical curriculum with anatomical knowledge taking a precedent position in the General Medical Council’s (GMC) guidance for “Tomorrow’s Doctors”1. Although a number of studies indicate that there is significant disparity between the standard expected from senior clinicians regarding the knowledge of medical students, there is sparse evidence pertaining to concurrent views of students in the same institute2. To address this, we asked the views of both senior clinicians in a London teaching hospital and those of medical students in their penultimate year, regarding the quality of undergraduate anatomy teaching.

Methodology
A questionnaire utilising a mixture of Likert and dichotomous questions was provided to penultimate year students including both the graduate entry programme (GEP) and undergraduate students, on the 5 year course, at St George’s University of London. The questions aimed to ascertain whether they felt that the pre-clinical anatomy teaching had sufficiently prepared them for clinical training and whether senior clinicians had complained about their knowledge of anatomy. A second questionnaire using the same question types was designed to decipher senior clinicians’ views of the quality of students’ anatomical knowledge and their opinion as to how this could improve.

Results
In total 232/304 students and 83/399 consultants completed their respective questionnaire (76% and 21% response rate respectively). Of the student group, 119 were GEP and 113 undergraduate students. Interestingly, 130 (56%) of students, 27 (32%) of clinicians felt students anatomy teaching prepared them sufficiently for clinical practice (p=0.0002).

Of note, was the fact that 145 (62%) students admitted that senior clinicians complained about their anatomy knowledge and 56 (66%) of clinicians felt student’s knowledge was either below average or poor. With regard to assessment, 174 (75%) of students and 5 (6%) of the senior clinicians felt that the examinations sufficiently tested their knowledge in preparation for clinical training (p = < 0.0001). 45 (54%) clinicians would be interested in contributing to anatomy teaching, but had time constraints, and 25 (30%) who would be keen to make a contribution.

Discussion and Conclusions
Clinicians feel students are unprepared and lacking in knowledge of anatomy which is in contrast to the views of students. Our results highlight the need to raise the standard of anatomy teaching and introduce a more rigorous method of assessing anatomy. Senior clinicians appear willing to contribute to teaching anatomy and further work could trial their involvement in teaching process in order to address this disparity.

Clinical Skills
Cross Specialty, Simulation Based Basic Endovascular Skills Training (SBT): An effective model for improving trainees’ confidence and interest, and enhancing patient safety

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Background and Purpose
There is currently no organized early stage SBT for trainees in the UK. We have designed two courses to meet the needs of trainees:
Basic Endovascular Skills (BES) is designed for specialty trainees (ST). Foundations in Endovascular Practice (FEP) is designed specifically for Foundation level trainees (FLT).
The aim of our study is assess the appropriateness, suitability and effectiveness of early stage cross specialty SBT for improving trainees technique and enhancing interest and recruitment into endovascular specialties.

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

Results
145 trainees have completed BES (n=71) or FEP (n= 62) (March 2012 - October 2013). 103 completed pre and post-course questionnaires. Trainees recorded greater confidence in safe arterial access (p=0.00), safe arterial closure (p=0.00) and all elements of safe navigation (p=0.00). FLT strongly agreed they had “more confidence making a career choice into their chosen specialty” (p=0.00). All agreed that training alongside colleagues from other endovascular specialties was useful. Written testimony was overwhelmingly positive.

Discussion and Conclusions
SBT offer a successful method of promoting recruitment into endovascular specialties, improving trainee’s endovascular technique thus maximising patient safety.
Improving Procedural Skills of Final Year Medical Students Through Experience; Breaking down Barriers

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Background and Purpose
Newly qualified foundation doctors often feel under-prepared for commencing their roles\textsuperscript{1,2}. The Procedural skills workshop is a programme under PULSE, which aims to improve the clinical competence & confidence of fifth year medical students at the University of Edinburgh (UoE). Previous work in the UoE has identified lack of confidence and anxiety in the ward environment as a significant barrier to students seeking opportunities to put these procedural skills learned in a simulated environment into practice.

We will explore whether participation in this programme leads to improved confidence both in the technical skill and in the ward environment to see if this encourages the students to seek more opportunities to practice in the clinical setting.

Methodology
These are ward-based sessions lasting approximately one hour. A checklist is used to ensure optimum technique & safety, and can also be used to measure improvement of student's competency. We are in the process of recruiting 18 fifth year medical students attached to the UoE. These students will complete a baseline questionnaire about number of procedures performed in simulation, real life and perceived barriers.

The students will be randomly allocated into two groups. Nine of the students will have a 1 to 1 in situ session on their base ward with a trainee doctor measuring competence with the approved checklist and giving constructive feedback. The second group will be the control group with no specific intervention. The researchers will meet the 18 students one month after initial session, and the results of the questionnaire will be compared between the groups.

Results
Quantitative data and qualified data about perceived barriers to practicing these skills in the ward environment and whether through this programme students seeks more real life opportunities will be presented.

Discussion and Conclusions
The researchers expect that after the sessions, students will have more confidence performing these procedural skills in their base clinical environment. This will break down perceived barriers and lead to students seeking more opportunities to perform these clinical skills in wards under supervision to create the cycle of learning.

References
Communication Skills
Happiness in medical students - the seminal path to understand others?

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Background and Purpose
Medical school is frequently a stressful experience to medical students. When compared to the general population, previous studies reported higher levels of personal distress, namely depression, anxiety and stress, and lower levels of happiness among medical students\(^1,2\), particularly in the first years of medical school\(^3\). The erosion of medical students’ mental health is a multifactorial phenomenon associated with several causes, including the adjustment to medical environment, medical curricula, academic demands, exposure to human suffering\(^4,5\). Personal distress reduces the quality of care provided by medical students and affects negatively their competency and empathy. Conversely, well-being is seen as a positive stimulus to the development of empathy\(^6,7\). Nevertheless, the association between empathy and these psychosocial characteristics, as well its magnitude and causality, is not yet totally clarified.

Our main goal was to examine the relationship between medical students’ empathy and their levels of happiness.

Methodology
We performed a cross-sectional study, by mean of a survey, comprising 432 medical students from the Faculty of Medicine, University of Porto. Social-demographic and professional characteristics were assessed and validated questionnaires to measure empathy (Interpersonal Reactivity Index -IRI), happiness (Oxford Happiness Inventory - OHI), depression, anxiety (Hospital Anxiety and Depression Scale - HADS) and stress (Perceived Stress Scale - PSS) were collected. The surveys were completed anonymously and data confidentiality and privacy were assured.

Results
Students showed a high level of happiness assessed by the OHI, positively correlated with Perspective taking and emotional concern empathic dimensions and negatively correlated with subscale Personal Distress.

Discussion and Conclusions
Students’ distress has been recognized as an important negative influence on empathy. Happiness and wellbeing imply satisfaction in several life domains and present results confirm they enhance the ability to understand others, to be compassionate and care. Medical schools investment in student’s wellbeing could contribute to foster professionalism.

References
Healthcare scientists’ perceptions of communication training

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Healthcare scientists provide the interface of science and service in the NHS. Roles include audiology, clinical biochemistry, rehabilitation engineering, toxicology, vision science and health informatics, all playing a vital role in diagnosis and treatment. The role of healthcare scientists in the UK is evolving due to the Modernising Scientific Careers initiative. Advanced training programmes are recently beginning to include communication training. Anecdotal experience suggests that healthcare scientists might not see the value of enhanced communication skills and consequently might not use knowledge and skills from such programmes in their professional practice.

Psychological theories aid our understanding of professional practice in health professionals and have been used extensively in the study of change in practice, uptake of research findings and use of clinical guidelines. A number of theories, models and concepts have been proposed as important in determining whether healthcare professionals will change their practice and we have created a questionnaire assessing 20 of these. We studied the perceptions of healthcare scientists attending a communication training session using this questionnaire.

Ninety postgraduate healthcare scientists took part in a 2-session communication training course and 86/90 (96%) completed or partially completed the post-course questionnaire. The communication training programme included, for example, introductions to listening, interviewing, exploring concerns and breaking bad news. We evaluated determinants of behaviour that can be summarised into capability, motivation, implementation plans and behavioural intention.

We found that motivation to use the knowledge and skills was high but that specific intentions to implement were lower. Self-efficacy was also high but behavioural control was lower. An awareness of need to change their communication was low pre course (retrospectively assessed) and slightly higher post-course. The response rate to the questions about implementation intentions were low, with participants indicating that using communication skills was not part of their role. We will present mean, standard deviation and inferential analyses of these data.

The healthcare scientists appeared to value the course and be motivated to use the knowledge and skills. However, many of them were unclear about what, where and when they would use communication skills in their roles. Educators can use these data to understand how traditionally non-patient-facing healthcare professionals might feel about adapting to a more patient-centred way of working.
Assessing Communication Skills Competency for Psychiatry Trainees: An Evaluation of the Royal College of Psychiatrists Assessment Pilot

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Background and Purpose
Advanced communication skills are an essential competency for the practise of psychiatry 1. The Royal College of Psychiatrists is concerned that trainees who are international medical graduates are not performing well in the clinical component of the membership exam, which particularly tests candidates’ communication skills. Similar concerns have been raised within General Practice training 2, 3, 4. Early identification of struggling learners is important to be able to provide key support and interventions 5. A new assessment instrument for evaluating competency in communication skills, the Formative Assessment of Communication Skills (FACS) was designed with the purpose of early identification of struggling trainees. An evaluation was performed to determine whether the FACS was fit for purpose.

Methodology
A mixed methods approach was taken to evaluate the FACS assessment instrument over four geographical UK core psychiatry training sites. Each site ran a FACS day for trainees in 2012. Quantitative data was collected on trainee and assessor characteristics. Trainee communication skills competency self-assessment ratings, assessment performance and feedback were collated. Assessors completed pre and post FACS assessment questionnaires. Several dimensions of the assessment instrument itself were considered; its validity, inter-rater reliability, internal consistency and acceptability. Qualitative data was collected to assess the experience of the assessment process for both trainees and assessors.

Results
The FACS instrument showed good face validity, good internal consistency (Cronbach’s alpha = 0.728), but low inter-rater reliability (kappa scores ranging 0.180 - 0.426). Acceptability was high from both trainees and assessors.

The performance of trainees relative to their place of primary qualification and site of training was related (Spearman's p<0.001 and p=0.004 respectively), the effect size of the place of primary qualification being the greater (β co-efficient 0.520 vs 0.442).

There was a highly significant positive correlation between the trainees’ pre FACS self-assessment total score and their actual performance on the FACS (Pearson's coefficient 0.487 p=0.01).

Discussion and Conclusions
Both trainees and assessors reported many positive experiences of the FACS assessment itself, believing that the assessment would be a helpful inclusion to their training, when used formatively. A number of helpful suggestions for improvement of the instrument were made. The FACS was shown to be a valid, reliable and acceptable instrument for the assessment of communication skills for psychiatry trainees. There should be a greater emphasis on the assessment and teaching of clinically orientated advanced communication skills within UK core psychiatry training schemes.

References
Empowering Medical Personnel to Challenge Through Simulation-Based Training

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The rigid structure of medical hierarchies within UK hospitals, with senior physicians and consultants very much in charge during ward rounds, can, in some instances, become the source of frustration and dissatisfaction for junior clinical and nursing personnel. In extremis, differences of informed opinion between senior and junior team members can become highly confrontational. This is especially so when the conflict takes the form of a challenge by the junior of a decision made by the senior relating to the type, extent and urgency of patient intervention. Such challenges can promote sustained interpersonal conflict and covert/overt peer ridicule after the event, and may even result in subsequent personal alienation and career compromise for the individual instigating the challenge. A more serious consequence of such medical conflict would be that the outcome impacted negatively on the patient’s health and well-being. Research conducted at the University of Birmingham, in collaboration with medical and nursing personnel at the Queen Elizabeth Hospital (QEHB), is evaluating the use of interactive computer simulation techniques as a possible future training solution, supporting ways of (a) empowering a wide range of medical personnel to challenge decisions they feel are inappropriate, and (b) raising the awareness of senior medical personnel as to the importance of encouraging and dealing sensitively with such challenges. Prior to the development of a simulation-based training concept, the transcripts of face-to-face interviews with, and questionnaire responses from, QEHB personnel (n=50, from medical students to consultants) were analysed to identify situations where participants had personal experience of having to challenge a medical decision or instruction. In brief, and as well as revealing that 26% of participants had already undertaken a form of training specifically targeting assertiveness, of those participants who had previously challenged a decision or instruction, 50% felt that their challenge actually changed the final outcome and 75% were satisfied with the outcome regardless of whether their challenge had been accepted or not. 62% stated that their decision to challenge was done so in the interests of patient safety. The wider results of this early research, together with participant narratives describing events leading up to the point of challenge, are currently being used to develop content for a prototype Virtual Reality simulator in which the end user is faced with a variety of scenarios and is required to observe interactions between simulated nurse, doctor and patient ‘avatars’, intervening where necessary to prevent a negative outcome.
Clerking the Four Classic ‘Difficult’ Historians: Simulated Learning to Prepare Tomorrow’s Doctors for the Challenges of ‘The Take’

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Background and purpose
Students in their clinical years seek out a lot of clerking experience. On the wards, they are directed to ‘suitable’ or ‘good’ patients by doctors and nurses. These ‘good’ patients only represent a minority of the patients who present on take, leaving students unprepared for the everyday communication challenges that they will face as junior doctors clerking the ‘take.’ Our aim was to broaden the students’ perspectives of the communication skills required by a junior doctor and allow them to practice in a high fidelity but safe environment. We also assessed student’s appreciation of various aspects of multi-source feedback.

Methodology
The four classic difficult historians were identified through interviews and focus groups with students and junior doctors as; (1) confused, (2) aggressive, (3) upset and (4) chatty. The workshop comprised of four stations, each with a role player playing one of the four difficult patients and a clinical teaching fellow observing. Students rotated through the stations in pairs. One student spent 10 minutes taking the history. Afterwards, that student received highly-specific, individual feedback from the role player, their peer and the CTF. At the end of the four stations the four pairs came together to debrief. Qualitative and quantitative feedback was collected via focus group discussions and an anonymous paper questionnaire.

Results

<table>
<thead>
<tr>
<th>Perceived Relevance (10 point Likert)</th>
<th>Angry</th>
<th>Upset</th>
<th>Chatty</th>
<th>Confused</th>
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<tbody>
<tr>
<td>N = 33</td>
<td>25</td>
<td>33</td>
<td>33</td>
<td></td>
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<tr>
<td>Before session</td>
<td>7.72</td>
<td>8.40</td>
<td>8.57</td>
<td>8.36</td>
</tr>
<tr>
<td>After session</td>
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<td>9.20</td>
<td>9.06</td>
<td>9.27</td>
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<tr>
<td>Improvement</td>
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<td>0.80</td>
<td>0.49</td>
<td>0.91</td>
</tr>
<tr>
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<td>0.0298</td>
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<td>0.0044</td>
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<tr>
<td>Confidence (10 point Likert)</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before session</td>
<td>5.57</td>
<td>7.92</td>
<td>7.06</td>
<td>6.69</td>
</tr>
<tr>
<td>After session</td>
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<tr>
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<tr>
<td>Rating of Multi-source Feedback (10 point Likert)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Actor</td>
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</table>

Discussion and Conclusion
This was a challenging, interactive communication workshop that has increased student’s perspectives of the types of patients who commonly present when ‘on take.’ Allowing students to experience clerking the four classic difficult historians in a safe but high-fidelity environment gave a statistically significant increase in their confidence. Students valued all aspects of the multi-source feedback.
It's been emotional: the communication OSCE as a valid measure of medical student’s responsiveness to patient emotion

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Background and Purpose
Few studies have examined the transfer of medical student’s clinical communication skills from the simulated OSCE to patient consultations in Primary care. This is surprising given the centrality of the OSCE in the assessment of medical student communication skills, and consistent calls by researchers and educators to incorporate “authentic” patient encounters in research. This study aims to explore the relationship between 4th year medical student’s emotional responsiveness to simulated patient cues in the OSCE, to their emotional responsiveness to patient cues in the clinical setting (primary care) in 5th year.

Methodology
37 medical students were videoed in their final 4th year communication OSCE. The same cohort was then also videoed in several patient consultations each (n=138) in the following 5th placement based year. All videos were micro-coded to analyse medical student’s responses to patient emotional cues with the Verona Consensus Coding Scheme 1.

Results
Medical students were consistently missing a significant proportion of simulated patient and patient emotional cues in both settings. A significant positive relationship (with a large effect size) was also found between medical students responsiveness to simulated patient emotional cues in the OSCE and patient emotional cues in the clinical setting (primary care).

Discussion and Conclusions
This 4th year communication OSCE is a valid measure of medical student’s responsiveness to patient emotion in the clinical setting (primary care). This provides some support for the notion that the OSCE clinical communication rating sheet adopted at the University of Liverpool, can adequately differentiate between medical students who respond to patient emotion and those who fail to respond to patient emotion. The presentation will also discuss the potential use of behavioural coding schemes in the training of medical students.

References
Junior-doctor facilitated tutorial and simulation-based role-play for practicing communication skills for topics in Obstetrics & Gynaecology

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Background and Purpose
Good communication skills are vital to patient care and current undergraduate medical school curriculums reflect this with an emphasis on communication skills teaching. Role-play is a commonly practiced technique for teaching communication skills to undergraduates, but little research has been done into the role of junior-doctor led teaching. Good communication skills are of particular importance when approaching emotive topics, such as those commonly encountered in Obstetrics and Gynaecology (O&G). We sought to provide students with an opportunity to practice challenging communication scenarios in a safe environment where they could explore the language, behaviour and communication styles employed in real life consultations. Tutorial and simulation settings were used to explore the importance of different atmospheres in role-play based communication skills teaching.

Methodology
Final year medical students at University of Birmingham on rotation in O&G at Walsall Manor Hospital (September-December 2014) were invited to attend two small group teaching exercises. The first session was an informal tutorial, and the second session in a simulation suite. Sessions were led by a Foundation Year 2 doctor in O&G, who undertook the role of patient actor. These were primarily focused on information giving and counselling on new diagnoses or procedures. Students were asked to complete feedback questionnaires after each session, where they compared and indicated their preference of the two environments. Additional feedback was sought from the students in a post-hoc discussion group. Quantitative data was collected using 5-point Likert scales for overall ratings of sessions.

Results
Twenty two students took part, with an average group size of 6 students. When asked to rate the usefulness of content and junior-doctor feedback, all students gave a positive response (Mean Likert score = 4.5). When asked about preference of setting, 71% of students voted for simulation. Thematic analysis of qualitative data showed that the students found simulation teaching to be ‘more realistic’ and ‘better preparation for clinical practice’. High pressure scenarios where the actor played an upset patient were perceived to provide additional teaching benefit.

Discussion and Conclusions
Junior-doctor led simulation is preferred by medical students over tutorial based teaching for communication skills in O&G topics. More research should be done to ascertain best practice for junior doctors teaching communication skills to medical students.

References
Continuing Professional Development
GPs’ development needs and activities: a retrospective study of appraisal data

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Background:
We have recently undertaken a study looking at GP teachers’ perceptions of changes in their own clinical practice as a result of teaching on a clinical reasoning course for undergraduate medical students. This work highlighted a need for the provision of opportunities for established general practitioners to develop their consultation skills in this field [1]. There is very little in the literature published since the introduction of appraisal and revalidation about what general practitioners in the United Kingdom include in their recorded Personal Development Plans (PDPs) and Continuing Professional Development (CPD) activities. There are suggestions from the pre-revalidation era that they may focus on illness management [2,3] and evidence that while some desired to develop their consultation skills, relevant activities were rarely available [4].

Aim:
This study aimed to analyse the records and planned learning of a group of established GPs to find out what their identified learning needs were, what they chose to include in their learning and what types of activity they engaged in to meet those needs.

Method:
Consent was obtained from a group of 24 Staffordshire and Shropshire GP appraisers to access and analyse anonymised records of their PDPs and CPD activity for the previous appraisal year. Data collection is in progress. Analysis will be statistical, descriptive and thematic – with the themes arising from the data. Prior to submission of this proposal, the NHS Research Ethics Authority’s decision aid was used [5] which indicated that its approval was not required. The Research and Development Officer and the Medical Director for NHS England’s Local Area Team reviewed and subsequently supported the study.

Results:
The full statistical, descriptive and thematic results will be presented at the conference.

Discussion:
In order for providers of medical education to plan appropriate learning opportunities information is needed about current general practitioners’ perceived needs. Every GP in the UK produces a personal development plan and a record of their continuing professional development activities annually, and these are potentially a rich source of information. If the findings suggest that this group of GPs identify a need to develop their consultation skills, they could be used to inform the planning of local development activities to meet this need.

References
Final-year medical students are harsh self-assessors

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Background and purpose
The drive towards academic excellence and developing new teaching methods to master self-assessment, now a GMC recommendation, required for ensuring continuous professional development is gearing up within the field of medical education. Medical students, no different from other healthcare professionals, struggle with the skill, perhaps due to the paucity of teaching it within the undergraduate curriculum. Some evidence in the current literature suggests that there is value in self-assessment followed by external assessment. Simulation is one area which has the potential to be self-guided with an abundance of opportunity to develop a more reflective approach to evaluating knowledge and abilities. We aim to determine whether students’ own evaluation of their performance in a simulated environment pre- and post-viewing of video footage against that of qualified clinicians assessing their performance simultaneously is accurate, and if their self-assessment skills improve with the use of video playback.

Methodology
Consented recordings of 50 final-year medical students leading an emergency simulation scenario were made over a five-month period in 2014 in a pilot study undertaken at Newcastle Medical School. Students were assessed by two independent clinicians. Post-scenario, students were given a self-assessment form with the same marking scheme used by the clinicians, after which they watched a recorded viewing of their own performance and re-assessed themselves with an identical marking scheme. An individualised feedback session led by the clinician markers followed. Three main analyses of the marking sheets were carried out: (1) a comparison of pre- and post- self-assessments (by paired t-test), (2) a comparison of self-assessments with faculty assessments and (3) summary statistics on perceived value of self-assessment.

Results
Our preliminary findings show an increase of 9.70% (t(43)=2.791, p=0.0039 in students’ mean self-assessment scores post-video viewing. We also found 68 percent of students showed improvement in post-video footage self-assessment scores, although the average clinicians’ score was still greater than the students’ post-video score in 91 percent of the scenarios; the correlation coefficient between clinician and student marks was statistically significant at 0.535.

Discussion and conclusions
Our preliminary findings suggest that final-year medical students are harsh self-assessors; this may indicate the continued need for experienced clinicians to guide them during the early stages of mastering the skill. We aim to conduct more extensive research on students’ ability to self-assess and the benefits of this skill in making the transition to becoming independent medical practitioners who are continually able to assess their own performance in the clinical world.

References
(1) General Medical Council. (2011) Assessment in undergraduate medical education. Advice supplementary to Tomorrow's Doctors 2009. GMC, online
Evaluation of a near-peer mentoring initiative implemented across all years of an undergraduate medical program

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Background and Purpose
Peer mentoring has been shown to be a significant source of support for those in the medical profession.\(^1\) It is beneficial not only with regards to career development and practical skills, but also helps mentees cope with stress.\(^1\) Mentoring is recognised as a successful tool for professional development and the GMC considers effective mentoring skills a requirement of qualified doctors.\(^2\) Despite this, mentoring has not been formally integrated into undergraduate medical education and existing mentoring programs concentrate on those in postgraduate training.\(^3\)–\(^6\) We developed a near-peer mentoring initiative across all years of the undergraduate medical program over our three main localities to assess the need for mentoring at various stages of training and to explore the potential benefits of the initiative to mentees, mentors and the institution as a whole.

Methodology
Following a successful pilot, 228 medical student volunteers from years 2-5 were trained and paired up to mentor 436 mentees during the academic year. Each mentor pair were allocated four students from the year immediately below their own. Apart from training, the initiative is entirely student-led and does not involve staff supervision. Evaluation is by mid-year and end of year questionnaires, interviews and focus groups of both mentees and mentors aimed to establish benefits and challenges, characteristics of successful mentee-mentor relationships, and areas of improvement for the initiative. Analysis of these results will be used to improve and further develop the existing initiative.

Results
78% of year 3 and 4 students who took part in our pilot said they would have benefited from a peer mentor in their earlier years. The idea that mentors and mentees were only one year apart was popular as was the support offered by mentors. We will present results from questionnaires, interviews and focus groups of this year’s initiative, and discuss areas of further development.

Discussion and Conclusions
The benefits of near-peer mentoring are attributed to the effect of cognitive and social congruence, whereby a similar knowledge base and social roles allow mentors to better understand the needs of their mentees and offer effective help.\(^7\)–\(^8\) The introduction of a near-peer mentoring initiative may therefore be beneficial in assisting students throughout their undergraduate medical education, whilst offering mentors an opportunity to develop new skills. The results of this study will be of interest to those educators trying to establish mentoring initiatives or new ways of delivering student support within their undergraduate programs.

References
Using In Situ Simulation to Provide Multi-Disciplinary Training and Improve Safety on an Elderly Care Ward

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Background
In situ simulation provides training for health care professionals in their everyday environment. It offers a more realistic environment than the simulation lab by introducing real time pressures and everyday distractions [1]. Through the use of familiar equipment in situ simulations programmes have also been shown to identify latent safety threats and improve safety [2]. Likewise, it provides a forum for discussion of hospital systems and protocols. In situ provides opportunities for multi-disciplinary training, facilitating team working and communication skills. Our aim was to set up a regular in situ simulation programme on the elderly care ward to train staff on emergency situations, improve knowledge of important protocols whilst identifying latent safety threats.

Method
Simulation was carried out on a 56 bed elderly care ward at Homerton Hospital. Participants were doctors and staff nurses based on the ward. Scenarios were chosen based on previous situations where clinicians felt care could have been improved or were used to improve knowledge of hospital-specific protocols such as use of the trauma team in head injuries on the ward and the implementation of a new ‘escalation form’ form establishing ceilings of care. A static resuscitation manikin was used and two I-Sim were used for monitoring. The scenario and debrief were limited to 20 mins each. The feedback form used a 5-level Likert scale; latent safety errors were noted and fed back to the ward manager.

Results
• A total of 8 simulation sessions have been carried out so far without any cancelled sessions
• 16 health care professions received training and formal feedback
• 100% of participants ‘agreed’ or ‘strongly agreed’ that the session would influence their clinical practice and benefit patient care
• 9 latent safety errors were identified

Conclusion
The programme provided valuable training to staff with minimal interruption to daily routines and was highly valued. Initially some participants were apprehensive that time taken for scenarios would negatively affect their clinical duties - immediately after participants appreciated the training opportunity and felt it would positively impact their clinical practice. The opportunity to take part in multi-disciplinary training was particularly beneficial, something which most had not previously experienced. Identifying latent safety threats has produced tangible improvements on the ward; in the first two simulations oxygen connectors and bag-valve-masks could not be found by the staff nurses, after feedback, by the time of the third session these were quickly located by the participants.

References
How to get Gender Medicine into Medical Education

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Aims
In Austria, we have a national and an international society for Gender Medicine and also national and international meetings every year. At all our medical universities we offer Gender Medicine as an elective. But how do we get Gender Medicine into the heads of our researchers? How do we incorporate Gender issues into all our lectures and all our research projects? We attempted to develop a method that would establish Gender Medicine as a regular subject, just as any other field of medicine.

Methods
Innsbruck Medical University offers two degree programs: Human Medicine and Dental Medicine. In both we introduced Gender Medicine as an elective, but at the same time we felt it was not enough to only teach volunteers. We wanted Gender Medicine to be a regular core subject, just like all other medical disciplines. So we included Gender Medicine in the compulsory curriculum twice. We started by teaching basics and then repeated the basics in the last year of medical training and discussed clinical experience with the students. Like all other subjects, Gender Medicine is included in the compulsory examinations. In the new degree program in Molecular Medicine Gender Medicine is incorporated as a Master Module that was developed in an EU project. Moreover, it is compulsory in the clinical PhD program, where the students also have to include gender questions and a gender project in their PhD thesis. Here, too, we strive to have young researchers practice including Gender Medicine questions in all their projects as a matter of course. The next step in an Austrian scientific career is to be granted venia docendi. The criteria for venia docendi also include a compulsory Gender Medicine course. Here again we try to discuss the inclusion of Gender questions in all subject lectures and all research projects.

Results
We have always seen Gender Medicine as a cross-cutting subject and thus from the beginning we aimed to cross-link Gender Medicine as a means of incorporating it in all medical disciplines. Moreover, we have also been successful in teaming up with Innsbruck University, where our ring lecture series is currently recognized as an elective for Gender Competence. Gender Medicine is also accepted as an elective in the PhD programs of all faculties, which gives rise to very interesting questions on Gender Medicine from completely different disciplines.

Conclusion
We started five years ago. In the beginning there were a lot of discussions and it was a controversial subject. Today it feels normal. So it looks like we were able to integrate Gender Medicine into the curriculum and into the research projects, at least those of our students. We hope that by including a Gender aspect in the scientific work for their PhD they will continue to do so in future.
The Leicester LINK Initiative: a novel student-led approach to widening access to academic medicine within the standard medical curriculum.

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Introduction
The advantages of undertaking an intercalated BSc have been established in medical education, and the benefits of developing essential skills such as literature review and data analysis have been known for some time.1,2 However, many students decide against an intercalated BSc due to various reasons, including financial considerations.3 Currently UK medical schools are limited in its opportunities to provide medical students with experience in academic medicine within the core medical curriculum. A general lack of awareness of fundamental concepts of research has been observed in medical students.4 There is therefore an unmet need to broaden the medical syllabus in order to provide future doctors with the skills and knowledge to undertake medical research in the future.

The Leicester LINK Initiative is a novel student-led scheme to enhance access to research during medical school, by providing a system where students are able to undertake projects which fit into their standard teaching timetable. This can allow students to begin to develop core skills within academic medicine without any drawbacks of an intercalated BSc.

Methods
Researchers and academics working within all medical specialties are invited to offer projects in their field. These projects are offered to all medical students who then apply for their preferred choices. The supervisor will then decide the successful applicant. Formal feedback was then collected during and after the projects, and suggestions were applied to improve the scheme for future rounds.

Results
Over the past two years, we have offered in total 50 projects via four application rounds, and have received 91 applications from students. Invaluable links with UHL academics have been formed over this period which will be important in developing this scheme further. Pilot data from the initial project rounds has been overall positive from students and supervisors alike.

Conclusion
The LINK Initiative provides a unique opportunity for medical students to take part in research during their time in medical school. This scheme has been expanded into other medical schools and we aim to widen the range and number of projects offered in the future to provide the most beneficial experience to medical students.

References
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E-learning
Online Revision Usage in MRCS Part A Candidates; The Road to Optimised Performance

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Background and Purpose
The Part A exam of the MRCS comprises applied basic sciences with principles of surgery and is common to all four colleges in the UK and Ireland. Traditional study and revision methods are now supplemented with online learning resources. One of these, PasTest (PasTest, Manchester, UK), has been offering online MRCS revision since 2005 and has been used by over 20,000 candidates to prepare for the exam since then. The PasTest course now comprises over 4,300 sample questions and App, Podcast and Video clip components.

The aim of this study was to examine the revision patterns in users of an online revision course, with a goal to developing prospective studies, allowing greater understanding of how MRCS candidates revise and thus how to optimise revision technology and techniques.

Methodology
We analysed the online data from PasTest for the tri-annual MRCS subscriptions during the specific period; January 2011 to September 2014. Statistical comparisons were made on the number of questions accessed by the pass and fail groups for each exam period using SPSS v 22 (IBM Corp, USA). Candidates were contacted by e-mail to determine whether they had passed or failed.

Results
After cleaning for duplicate, incomplete or inconsistent entries, there were 5835 individual customers who accessed the service 9387 times. Total number of modules for which an outcome was eventually recorded was 1218 representing 786 candidates. 563 (71.1%) passed, 199 (25.3%) were recorded as not passing and 24 (2.7%) had not taken the exam at the time of census. Both data sets are significantly negatively skewed (Shapiro-Wilk statistic, p=<0.004) with differences in the distribution of answers. The values for pass candidates are not significantly different between exam periods (Kruskall-Wallis, Independent samples p=0.154), but those of the candidates who failed show some differences in 1 exam period (Kruskall-Wallis Independent samples, p= 0.01). In all periods the number of questions answered in the pass group was significantly different to the fail group (Mann-Whitney U-test, p=<0.0001) a Bonferroni correction was used for multiple comparisons with p= 0.01 taken as significant.

Discussion and Conclusions
This study has shown that the level of engagement with an online revision course remained the same over a 3-year period and that, throughout, the successful candidates attempted more questions than the ones that failed. Although self-reporting can lead to positive selection bias, we included unknown outcomes with the fail group and so will have inevitably included some candidates who passed. Further work will focus on developing revision protocols to improve exam performance.
Military medical ethics: The development of an eLearning module by a student with active military service experience

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Purpose
Ethical education is mandated by the GMC and is a key component of every UK medical school curriculum. However many medical students struggle to see the practical relevance of ethical education and have trouble learning the key ethical concepts. In order to address this, an eLearning module has been developed at Dundee University Medical School. The module was created as a self-proposed and self-selected project by a British Army Officer who returned to university to study medicine, and is broadly based on his own military experience. His work was overseen and supervised by the Dundee lead of ethics teaching, who made sure the module supplements and further develops the medical ethics curriculum in Dundee.

Product
“Articulate Storyline” eLearning software was used, and combined with multimedia content to create seven case studies. Some focused on medical ethical dilemmas from recent British military history (e.g. The Iraqi detainee abuse scandal, Cold-War unconsented medical testing, and recent military humanitarian work), whilst others focused on real ethical dilemmas experienced by university students on medical electives abroad. Each case study was used to illustrate and discuss various key ethical concepts that medical students need to understand. These ethical concepts were then directly related to healthcare situations that medical students and junior doctors may experience, in order to highlight the direct relevance of ethical education to medical practice. Additionally the module includes a revision section defining and then testing each key concept in order to consolidate student understanding. It also features interactive content educating medical students about the realities, practicalities and unique challenges of military medicine and generally practicing medicine abroad.

Practical Application
The module offers students an engaging way of learning ethical key concepts, and also provides them with memorable and realistic case studies to ensure they understand the practical applications of medical ethics. It is designed as a timesaving revision guide for medical students to use before their annual exams. It also educates students, many of whom have no prior military knowledge, about military medicine and the realities of the work done providing vital medical care in extremely challenging environments. The module is therefore also beneficial to students preparing for electives abroad or for work in countries of political and social unrest.

Module Link
https://mbchb.dundee.ac.uk/files/ethics/studentSSC/ethicalconcepts_militarymedicine (It is not currently accessible outside of Dundee Medical School, but can be made available to other schools on request.)
Learning in the clinical environment: can static become mobile?

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Background and Aim

Mobile technologies are increasingly being adopted: institutionally by medical schools and independently by students in order to support learning in the clinical environment.\textsuperscript{1,2,3} Whilst the ubiquitous nature of mobile technologies brings us one step closer to Sharples\textsuperscript{4} (p 233) vision of “learning anytime, anywhere”, the theoretical basis of mobile learning (m-learning) is poorly understood, inadequately researched and as a result, often poorly supported.\textsuperscript{5,6} This research was a direct result of these concerns.

Aim

To explore how students are using mobile technologies in a clinical context to develop a theoretical understanding of m-learning and pragmatically inform academic practice.

Methodology

A broadly qualitative methodology was adopted. Data collection consisted of six semi structured interviews of medical students and was analysed via thematic analysis.

Results

Four broad themes were identified including: the nature of m-learning, multiplicity of functions, the effect of technological factors and sociocultural acceptability. Facilitators to m-learning in a clinical environment were highlighted (portability, speed, collaboration, control) as were barriers (rules, acceptability, trustworthiness, limitations).

Discussion and Conclusions

These results provide a detailed exploration of students’ experiences of m-learning in a clinical environment. Medical student’s value m-learning and use mobile technologies as a supplementary clinical learning resource, gathering small chunks of information in a timely manner. Use is influenced by convenience, ease and functionality of the device. Immediacy of information, integration of learning activities and intuitive designs promote m-learning although sociocultural factors impact upon their use and there remains a pervasive negative perception of mobile devices within the clinical environment. Students are using and institutions are ostensibly supporting m-learning\textsuperscript{8}. However students in this study describe a lack of support and understanding from staff. For m-learning to become mainstream within medical education, a shift of attitudes is required. Negative perceptions must be addressed whilst barriers to access, adapting resources for mobile technologies and disseminating rules of ‘mobiquette’ are essential. This research provides both practical guidelines to clinical academics and a novel conceptual model of the m-learning process in a clinical setting.

References:

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A report on the eLearning programme of the Irish College of General Practitioners which can address continuing education needs of primary care physicians.

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Background
The case for continuing professional development has been well made, and was formalised in Ireland in recent years through enactment of the Medical Practitioners Act, which requires registered medical practitioners to complete a minimum of 50 hours CPD each year. The ICGP, who have been providing CPD opportunities to its members for many years, have responded to this need by developing a series of evidence-based, high quality, multimedia modules across a range of clinical & non-clinical areas. (More traditional education opportunities are still being provided by the college also).

Overview of Programme
The first module was released in September 2011, since when the eLearning programme has grown steadily, and there are currently almost 20 modules available, with a further 5 in production. Each module contains three to six 10-minute video lessons, which use a combination of graphics, images, text, voice-over and clinical clips. These are supported by supplementary videos of expert pieces-to-camera, Q&As with content experts, clinical scenarios, external links and relevant documentation and other resources. Successful completion of MCQs will result in a Certificate of Completion, which can be printed or stored in Professional Competence portfolio.

The Medical Practitioners Act requires doctors to gather CPD credits across 8 domains of practice, and various eLearning modules have been developed to address each. For instance, modules with a strong clinical content would include Management of Hypertension, Management of COPD, and Management of Asthma. Other modules focus on health promotion such as Promoting Smoking Cessation, Promoting Physical Activity, and Addressing Childhood Obesity. Modules where communication skills are key, include modules on Suicide Prevention, and Management of Depression. Other modules, currently in development include non-clinical topics around risk management, including Confidentiality, Consent etc.

Each module is developed by a core group, which includes where possible, a GP with a special interest in the area, and a content expert(s). The college works closely with a medical education consultant and a production company in developing and producing the modules.

Modules can be accessed (with password) through the ICGP website and are available free to all ICGP members.

Summary of Evaluation
There are over 1700 registered users to date (over 55% of College membership). The programme was evaluated using an online survey in 2013 (N = 144/950 – 12%) and results were very positive overall, but provided material for further improvement of the programme also.

Future Plans
While knowledge can be imparted well through eLearning, skills & attitudes are more difficult to influence through an online environment. The college is now developing a series of linked workshops, which will lead to ICGP Professional Competence Awards. The first pilot workshop is scheduled for February 2015, and is Cardiology-themed. Participants will be required to complete the following 4 modules in advance of attending – Management of Hypertension, Management of Heart Failure, Promoting Smoking Cessation, and Promoting Physical Activity. The workshop will be case-based and interactive, addressing ECG Interpretation in General Practice.

Conclusions
The ICGP have responded to members needs for high quality evidence based education delivered in a way that suits GPs.

NOTE – As this programme is very visual, the college is happy to provide adjudicators access to the ICGP Education hub on request in order to better evaluate this programme.
Faculty Development
Developing clinical teachers with teaching observation – culture change through action-research

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Background and Purpose
Clinical teachers are under increasing scrutiny and regulation than ever before in the UK. Consultant trainers are now required to accredit in teaching and supervision skills[1], and trainee doctors are increasingly required to seek assessments of their teaching ability. Despite this, support and development for teachers can be lacking. One-off assessments and courses are available, but there is little support for “life-long learning” and reflection. Teaching observation can be a potent stimulus for teacher reflection[2], and is an established part of educational culture in many areas of higher education. However, until recently it has been almost non-existent in post-graduate clinical teaching in the UK. In order to address this, we wanted to introduce teaching observation into the culture of our institution.

Methodology and methods
We have followed an action-research methodology, as we wanted to introduce change in a robust, critical and rigorous way, and to stimulate culture change. Methods include literature review, online searching for documentation used by other institutions, meetings to agree direction and consensus and generation of a pilot form. We carried out a round of teaching observations among our faculty, and focus groups to discuss our reflections. These were transcribed and analysed. This led to another round of discussion and agreement and will be followed by a seminar to consolidate and accredit our skill in teaching observation. The next stage will be rolling out teaching observation to clinical teachers across the site. We will then evaluate the impact of this with multiple methods: written feedback from observees, invitation to further focus group discussions and feedback from observers.

Results
Results from our initial round of document analysis and focus group discussions will be presented, and the impact these had on our way forward. We have agreed upon a collaborative, developmental model of teaching observation. The service will be rolled out across the trust, and we will present data concerning the impact this had.

Impact and discussion
Action-research methodology has allowed us to develop a developmental style of teaching observation that is relevant and useful to clinician observers. Teaching observation is now being offered to clinical teachers, and that impact will be evaluated. If successful, we believe that our work could provide a model for similar initiatives elsewhere in the UK. A possible future direction may include support of peer-observation within or across departments.

References
Postgraduate & Undergraduate Learning in the South East (PULSE) Developing An Army of Educators

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Background and Purpose
The General Medical Council (GMC) ‘expects all doctors to be willing to contribute to educational activities’ 1. Recent guidance from ‘Tomorrows Doctors’ 2 and ‘The Trainee Doctor’ 3 supports appropriate training and appraisal for all those involved in medical education.

We propose that by developing a co-ordinated regional programme we can introduce formal educational training to junior doctors at an early stage. This will help to develop a faculty of junior medical educators and improve the educational experience for both doctors and medical students.

Methodology
We have been developing the infrastructure for Postgraduate and Undergraduate Learning in the South East (PULSE) since September 2014. The programme now contains 7 separate clinically relevant workshops designed by junior doctors for medical students and it is delivered across three health boards.

We have introduced a number of initiatives to provide support and assure quality such linking expert supervisors to each workshop. All teaching activity is co-ordinated through an online booking system and PULSE educators (F1-ST7) are now encouraged to complete the Clinical Educator (CEP) Introductory Level certification.

Results
A mixture of quantitative data, about the number of PULSE workshops taking place across the expanded region, and qualitative feedback about the trainees and medical students experience will be presented. Provisional results suggest a significant increase in engagement with this programme with over 200 trainee doctors inducted since September 2014.

Discussion and Conclusions
There is a great deal of literature supporting the use of peer learning. Combining this with workshops focussed on areas junior doctors are known to feel underprepared would seem beneficial both to the doctors and medical students. This study aims to expand the current literature to identify a blueprint for developing junior doctors as medical educators on a regional scale, helping to identify challenges and solutions of the best ways to develop and support this faculty.

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Kirkpatrick level 4 evaluation of the Homerton Teaching Skills Workshop: a randomised controlled study

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Background and Purpose
Teacher development is an unmet professional development need of newly qualified Foundation Year (FY) doctors. We recently reported on how our Kirkpatrick level 2 qualitative evaluation of the Homerton Teaching Skills Workshop, designed to meet the training needs of FY doctors, could increase knowledge and encourage behavioural change amongst Workshop participants.\(^1\) The aim of this study is to undertake level 4 evaluation of the Homerton Teaching Skills Workshop by comparing the OSCE examination performance of medical students that were taught by FY doctors with Workshop training as compared to those without Workshop training.

Methodology
The study begins in March 2015. It will involve 10 Homerton Hospital FY doctors randomised into the intervention or the control group. Each FY doctor in the intervention group will undertake a one-to-one Homerton Teaching Skills Workshop, delivered by up to 4 near-peer faculty members. The Workshop programme (a blended learning programme combining online-asynchronous and face-to-face learning activities) is equivalent to one day of training activities covering basic learning theory, lesson planning, direct observation of teaching with feedback and debriefing. The full Workshop protocol is published in Tso et al (2014).\(^1\) 30 third year Barts and the London medical students undertaking their rotation at the Homerton University Hospital will be randomized into the intervention or the control arm. In both groups, FY doctors will deliver a teaching session on a communication skill and one ambulatory care skill based teaching session in OSCE formats. The OSCE examiners will be blinded from the medical students' participation in the study. FY doctors’ self-assessment questionnaire ratings and medical students’ OSCE results from the intervention and control groups will be compared using non-parametric statistics. Local ethics committee and NHS R&D permission was granted to carry out the study.

Results
We will present our trial experiences and the preliminary results at the conference.

Discussion and Conclusions
The General Medical Council's 'Good Medical Practice' highlighted that clinicians "should be prepared to contribute to teaching and training doctors and students". FY doctors should be supported in their professional development into clinical teachers. In this trial, we are using OSCE as the main assessment method to evaluate the impact of the Workshop. OSCE has been demonstrated as a “reliable and versatile tool to assess clinical competencies, practical and communication skills”\(^2\) but it has its limitations, and together with the small sample size, it may be difficult to demonstrate statistical significance in our results. Nevertheless, findings from this study may highlight areas of generic and specific teaching skills that FY doctors need to further develop.

Acknowledgment
We would like to thank Dr Jon Fuller for his help with the set up of the study.

References
What is good quality education research? Developing an education research quality framework.

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Background and Purpose
There has been ongoing debate around the quality of medical education research(1). The University of Bristol is well represented through presentations and posters at Medical Education conferences and as part of a University teaching fellowship project I have been tasked with reviewing the quality and range of pedagogical research happening in the Faculty of Medicine and Dentistry and further developing its quality. As a starting point for this project a quality framework for reviewing educational research was developed in order to assess where we were and identify possible areas for development.

Methodology
Drawing on work from the fields of Medical Education(2), Higher Education(3) and training(4) a literature review highlighted potential categories for the analysis of pedagogical research. However, this framework was further developed through an iterative process of reviewing the Bristol abstracts for the ASME 2014. This review and framework now forms the basis for consultation with stakeholders, through workshops and interviews, about the key quality indicators for pedagogical research and those areas of inquiry that we should focus on as a faculty.

Results
The quality framework used to evaluate past submissions highlighted favoured topics and areas of both strengths and weakness. It was particularly encouraging to see, for example, that not all work fell at the lower levels of Kirkpatrick’s model or Cook’s description category, for example. The framework for analysis of quality will be discussed alongside the review of Bristol abstracts. The findings from the stakeholders’ consultation will be presented and discussed.

Discussion and Conclusions
It is difficult to simply apply a quality framework when the work surveyed encompasses qualitative, quantitate or mixed methods enquiry and is produced by junior doctors, medical students and faculty (or a combination thereof). By drawing on a number of models and returning to the data in an iterative process it has been possible to derive an overview of pedagogical research happening in a large faculty spread over a number of sites. This has better informed a conversation about the development of future research initiatives and, it is hoped, some consensus on what we consider ‘good’ research.

Teaching public health in UK medical schools – the challenges of the vertical strand

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Background and Purpose
Policy initiatives in the UK have placed an increasing emphasis on public health teaching within the undergraduate medical curriculum\(^1\) and across the medical workforce\(^2,3\). We aimed to describe teaching input into medical curricula, to identify challenges in the delivery of public health teaching and make recommendations that may overcome them.

Methodology
We conducted a cross-sectional survey of teaching leads in academic departments of public health in all 32 UK medical schools. This was based on a previous survey from 2005\(^4\) to allow comparison over time. Questionnaires were supplemented by telephone interviews. Quantitative data was analysed descriptively using Excel 2007. Themes drawn from the questionnaire and interviews are presented together.

Results
24/32 (75%) of medical schools replied. 11 interviews were carried out. 20% of schools described their teaching as traditional, lecture based; 33% problem-based learning; and the remainder (46%) as mixed methods. 38% of public health leads would like more curricular time for public health. Health informatics is the learning outcome from Tomorrows Doctors\(^1\) least frequently offered as part of core public health teaching. 92% of schools offer students the opportunity to undertake a project in public health, while 54% of schools offer some form of public health placement. Public health contributes to summative assessment in particular years and/or finals in all schools. 96% use MCQs to assess public health. Fewer than half of schools assess students through poster presentations (46%), OSCEs (41%) and project work (38%). Only 29% assess students using essay-based exams. There was no significant difference between the sizes of the schools who utilise essay-based exams, coursework essays or project work, and those that don’t. 54% of teaching leads either did not know how much finding was available to support public health teaching, or stated there was no discrete budget. In considering factors affecting the long term sustainability of public health teaching delivery, 61% specified staff levels/staff availability as an issue, 22% identified adequate funding as a problem, 13% were concerned about the need for research productivity on teaching commitments, and 8% expressed concern about the possibility of NHS changes to public health impacting on the delivery of their courses.

Discussion and Conclusions
There is a need to increase the supply of well-trained and motivated teachers and combine the best traditional teaching methods with more innovative, clinically relevant approaches. Suggestions are made as to how undergraduate public health can be strengthened.

References
How do students use feedback on their teaching?

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Background
Peer observation of teaching is a process in which an observer watches a colleague's teaching and provides descriptive feedback on their teaching practice\(^1\). The process aims to stimulate reflection in both the tutor and observer, ultimately leading to improved teaching\(^1\).

In an effort to develop the teaching skills of student tutors at Keele Medical School, extra-curricular peer-teaching is peer-observed by experienced students trained in observation and feedback through a half-day workshop. The format adopted for peer-observation incorporates elements of both the developmental model and the collaborative model described by Gosling\(^2\). Students meet for a pre-observation meeting to discuss learning objectives and agenda for feedback, are observed teaching, and then meet for a post-observation debrief following the principles of agenda-led feedback. They are subsequently provided with written feedback and encouraged to reflect on the experience and their feedback.

This study aimed to explore students’ experiences of peer observation of teaching and how they use feedback provided on their teaching.

Methods
Individual interviews were held with students who had received feedback on their teaching after observation by their peers. The semi-structured interviews were conducted by a medical student peer who was not involved in providing peer observation. Interviews were audio recorded and transcribed verbatim. Transcripts were independently analysed by two researchers through thematic analysis following principles of the constant comparative method. Ethical approval was granted from Keele University School of Medicine Ethics Committee.

Results
To date six interviews have been held. Preliminary analysis suggests that students chose to have their teaching observed for a number of reasons: to develop their skills and competence as a teacher, in recognition of the important role this plays in their career; to provide reassurance that they are providing good quality teaching; to ensure the content of their teaching is appropriate and accurate; and to provide evidence of engagement in, and development of, teaching. Students described feeling nervous before the observations, and preparing more for their teaching than they might normally, however, during the observations they felt more comfortable which they attribute to the peer-peer relationship.

Students described finding the narrative feedback more useful than the quantitative elements as it provided more detail as to how they might improve. Several students described how they have used the feedback they have received on their teaching to improve subsequent sessions.

Conclusions
Peer observation of teaching is an acceptable and valued method for developing students’ teaching skills.

References
International Medical Education
Implementation of national competencies in Egypt: House officers’ and first year residents’ experiences of learning

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Background and Purpose:
Over the past 25 years, there has been a move towards countries developing national competency frameworks in medicine and developing more global competency frameworks to facilitate working across borders. Some highlight that medical competences should be tailored according to the local context considering issues such as social and educational structures. In 2008, Egypt reformed the medical education curriculum and a national competency framework, the National Academic Reference Standards (NARS), was developed using international guidelines such as Tomorrow’s Doctors. The NARS identifies competencies that medical students should achieve by the end of medical school which culminates in a series of placements in the final year (house officer year).

This study explores house officers’ and first year residents’ perspectives on the NARS in relation to their learning experiences: 1) Do the house officers and residents have knowledge of and value the competencies described in the NARS? 2) How do the learning experiences during the house officer year support or not support the attainment of these competencies?

Methodology
Based on a social constructivism epistemology this qualitative research included focus groups and personal interviews with a total of 22 house officers and junior residents from four different training and workplace locations (e.g. rural and urban settings) in Egypt. The participants provided personal incident narratives about their experiences during the house officer and first year of residency. We applied qualitative framework analysis to all narratives using Atlas-Ti identifying content- and process-related themes i.e. what participants say and how they say it respectively.

Results & Discussion
We identified a total of 51 narratives; 31 by house officers and 20 by residents. Both study groups had little knowledge about the national competency framework, although when given information on the NARS, felt it was of value for their training and practice. When reflecting on the competencies, participants felt that not all were met equally. House officers and junior residents felt best prepared for the clinical and procedural skills and also valued them more than the other skills and competencies outline in the NARS. However, context specific facilitators and barriers were identified in meeting all of the competencies. This study provides insight into possible educational challenges associated with adopting competency frameworks.

Implementing the 2012 Fellowship Program for Psychiatry in Australia and New Zealand

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Introduction
In December 2012, the Royal Australian and New Zealand College of Psychiatrists (RANZCP) introduced the 2012 Fellowship program, following five years of systematic development, as has been presented previously. This paper outlines the implementation and evaluation of the program.

Implementation
The implementation of the new program was staggered with Stage 1 starting in December 2012, Stage 2 December 2013, and Stage 3 December 2015. Trainees from the previous program will transition to the 2012 program in 2016. Thus at the time of writing, the initial cohort has completed the first two years of training. Multiple methods were used to inform all participants of the forthcoming changes. These included the RANZCP website, newsletters, emails, congress presentations and workshops, direct consultations with key stakeholders, and communication through training representatives, supervisors and Directors of Training.

Evaluation
In 2013 and 2014 we evaluated the implementation of the program. An independent organisation conducted focus groups and surveys were conducted by the RANZCP in each branch across Australia and New Zealand. Supervisors and Trainees (separately) were interviewed and surveyed so that results were triangulated and comprehensive.

Results
Focus groups-44 trainees, 33 supervisors and 14 Directors of training participated, giving 20 hrs of data. Discourse analysis was used to identify key themes. Participants were largely supportive of the program and saw the first year as successful. It was notable that anxiety and concerns decreased with time from the program’s introduction. Key concerns included the timeliness and clarity of information, the timing of assessment and form completion.
Surveys-36% of trainees and 37.5% of supervisors responded. Both groups found the increased paperwork problematic and wanted more information regarding the use of forms. Both groups were supportive of EPAs and WBAs and found that EPAs provided a good structure for supervision. Changes during the implementation were challenging: while the staff endeavoured to be responsive to feedback by changing aspects of the program (e.g., reducing the number of EPAs required) such changes inevitably added to trainee and supervisor anxiety and uncertainty.

Discussion
Despite multiple modes of informing stakeholders, it remains challenging to prepare them for significant changes. Despite that, as the changes become established, anxiety diminishes. Responding to feedback during implementation is equally challenging, as being responsive may necessitate further changes. The optimal timing of such changes remains unclear.

References
Inter-professional Education
Undergraduate inter-professional education using high-fidelity ward simulation

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Background and Purpose
Lack of effective teamwork and well-developed inter-professional communication is a well-recognised cause of poor patient care and outcomes1,2. Inter-professional education (IPE) allows professionals to learn from and about each other to improve collaboration and, ultimately, the quality of care. Although IPE and high-fidelity simulation are well-established in their own right for teaching, to-date they have predominately been used in postgraduate teaching, and, in the case of high-fidelity simulation, in a uni-professional context. There still remains debate as to when and how this should be introduced to undergraduates3. The aim of this project was to establish whether high-fidelity ward simulation could be used to facilitate inter-professional learning at an undergraduate level with final year nursing and medical students to improve non-technical skills.

Methodology
Three high-fidelity simulation scenarios were created, each involving two patients. The simulation training was delivered to 30 final year medical students and 21 final year nursing students divided into six sessions. In each session the students are divided into small inter-professional groups and each group work through one scenario while the rest of the group watch via video link. Following each scenario, students reassemble for reflection and debriefing on performance. After the session the participants are asked to complete a questionnaire using a 10-point Likert scale (1=do not agree, 10 = strongly agree). Free text boxes are also provided for reflection, which allow for exploratory thematic analysis.

Results
Results from 6 sessions for 14 medical students and 8 nursing students showed an overall rating of 9.7/10. The students felt the teaching improved their communication, teamwork and clinical judgement skills with an average score of 9.0, 8.9 and 9.0 respectively. Additionally, students felt the teaching improved their awareness of their role within the multidisciplinary team (MDT) and other health professional’s roles within the MDT, with an average improvement in score of 1.7 (p value <0.005) and 2.2 (p value <0.005), respectively. Feedback has identified 2 common themes. Firstly, the teaching has improved confidence to communicate clear and relevant information successfully and, secondly, that the students would all like more opportunities to be involved in IPE simulation.

Discussion
A simulation approach to IPE has been extremely successful and initial results have been shown it improves non-technical skills in both medical and nursing students.

References:
Point of Care Simulation Training for Operating Theatre Staff

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Background and Purpose
High-fidelity simulation-based teaching is a way of putting theory into practice without posing any risk to patients\(^1\). Critical incident reporting has shown that poor performance in ‘human factor’ skills, such as teamwork, leadership and situational awareness, are frequently identified as key features in adverse events. Simulation training is a well-established and highly effective way of developing clinical and non-clinical skills and addresses patient safety through practice of high-risk, low-frequency events within a safe and structured learning environment. This is particularly relevant in the operating department where staff need to be able to respond appropriately to rare but serious events.

At the Great Western Hospital there is currently no formal simulation training program offered to the operating department staff. This was a pilot study to determine whether in situ, multidisciplinary, high-fidelity simulation aimed at Operating Theatre Staff developed clinical and non-clinical skills.

Methodology
An interprofessional simulation teaching session was delivered to all operating theatre staff (including anaesthetic nurses, scrub nurses and recovery staff). Scenarios were created and delivered using a simulation mannequin in the theatre recovery and their usual clinical resources. Doctors trained in simulation and debriefing delivered the session. Scenarios included anaphylaxis, tachyarrhythmia and airway compromise. The debrief covered important clinical and non-clinical learning points. After the session the participants were asked to complete a questionnaire using the Likert scale. Free text boxes were also provided for reflection, which allowed for exploratory thematic analysis.

Results
20 staff members were included in the training. Feedback identified 3 main themes. Firstly, it allowed for improved teamwork skills between specialties. Secondly, participants appreciated the relaxed and supportive training environment with controlled conditions. Finally, participants felt it was realistic and relevant to their practice, with the content relevance score averaging 3.8/4 (1=irrelevant, 4=all relevant). Overall confidence in the initial management of the acute clinical conditions improved by 3/10 points on the Likert scale as a result of the session (p value = 0.004).

Conclusion
Point of care simulation training is a beneficial way to ensure continuing professional development in operating theatre staff as it can develop both clinical and non-technical skills. This training program will continue to occur as part of the operating theatre staff monthly clinical governance teaching. Future scenarios will be created in theatre, the anaesthetic room and recovery.

References
Interprofessional Obstetric Emergency Simulation Training for undergraduate medical and midwifery students

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Introduction
Interprofessional training is advocated by the General Medical Council, World Health Organisation and UK Department of Health however, there is little consensus on how this should be achieved. Currently there is a wide variation in interprofessional teaching methods between UK medical schools.

Methods
Bristol has been running a successful undergraduate interprofessional obstetric emergency simulation study day for medical and midwifery students since 2012. 4th year Medical students from the University of Bristol and 2nd year midwifery students from the University of West England are invited to participate in the interprofessional training programme during their clinical maternity attachments. The programme is run on a quarterly basis by a multi-professional faculty of obstetricians, midwives and anaesthetists from The University of Bristol, The University of West England and North Bristol NHS Trust. The study day includes a combination of short lectures, interactive tutorials, team-building exercises, and simulation-based skill training focusing on four clinical topics in emergency obstetrics; post-partum haemorrhage, cardiac arrest, sepsis, shoulder dystocia. Emphasis on key transferrable skills in recognition of the unwell patient, calling for help, initial patient resuscitation, team work and communication skills is carried throughout the four simulated scenarios.

Results
Student feedback has been strongly positive. Students have commented that practising simulated emergencies in interprofessional teams increased realism, understanding of teamwork and knowledge of these emergencies. Both groups of students report a preference for learning about each other’s roles through practical simulations above their previous experience of lecture based interprofessional initiatives. The students have also recommended that the Medical and Midwifery degree courses should increase opportunities for multi-professional simulation based learning throughout their training.

Conclusion
This interprofessional simulation training intervention is effective in improving knowledge and interprofessional attitudes for medical and midwifery students. Students gained insight into team working and professional roles, in addition to acquiring core clinical skills. Interprofessional collaboration underpins safe, effective clinical care and our successful experience provides support for the increased implementation of interprofessional simulation based learning in other undergraduate programmes and expansion into other medical specialties.
Team-based Simulation in the Surgical High Dependency Unit

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Simulation training is now an established part of undergraduate and postgraduate medical education, allowing for experiential learning in a safe environment [1]. In more recent years team-based simulation has been developed for facilitating interprofessional education (IPE), allowing professionals who normally work together to reflect on their collaborative practice [2]. We aimed to pilot an “in situ” team-based high fidelity simulation programme for junior doctors and nurses working together in the surgical high dependency unit (SHDU) in our hospital.

Methods
We designed a programme of 4 sessions to simulate commonly encountered medical emergencies in the (SHDU). Buy in from all stakeholders was facilitated through a series of meetings and suitable locations and times were identified in conjunction with the senior charge nurse. On the day of the session nurses on the unit were identified to participate, with arrangements made to cover their clinical duties. 2 FY1 trainees and 1 junior anaesthetist were also asked to participate. Sessions lasted 1 hour with a 10 minute introduction, consisting of familiarisation with the mannequin and a short presentation on the clinical topic to be covered in the scenarios. 2 x 5 minute scenarios were then run with 25 minutes facilitated debrief after each scenario.

Results
To date we have delivered 2 sessions, covering anaphylaxis and sepsis with 14 participants, 3 of whom had not been exposed to simulation training before. All participants agreed that the sessions met their expectations, were relevant to their clinical role and should be a regular training feature. Qualitative comments have been extremely positive towards improving teamwork and performing tasks under pressure.

Progress
2 further sessions are planned and will be delivered by the end of July 2015.

Discussion
Our data confirms that this type of team-based “in situ” high fidelity simulation provides a useful learning experience for a multi-disciplinary team in the critical care environment. Whilst participants identified learning of many technical and non-technical skills, further evaluation is required to demonstrate a change in workplace behaviours in these teams. A number of challenges must be overcome to deliver a programme of this type, most significantly the availability of an appropriate space in a busy critical care ward, availability of staff to participate without distractions and faculty organisational time. However we have demonstrated that with good buy in from all stakeholders and enthusiasm from both participants and faculty a successful learning experience can be achieved.

References:
A novel simulation based inter-professional training programme to enhance non-technical skills – The TINSELS project

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Background
‘Non-technical skills’ refers to social (communication and team work) and cognitive (analytical and personal behaviour) skills and play a vital role in the support of high quality, safe, and effective care. Training in non-technical skills in a healthcare setting has been of great interest over the last decade, enabled largely through the deployment of increasingly sophisticated simulation training; but while the majority of publications focus on ‘whether’ such education can be successful, they ostensibly overlook the question of ‘how’ certain educational tools are effective and lack clearly defined learning outcomes, a conceptually underpinned pedagogy and replicable educational materials. We therefore undertook to design and pilot an original teaching package that addresses non-technical skills in the context of medicines safety through simulation-based inter-professional learning.

Methods
A modified Delphi process with recruitment from a panel of international experts and all local stakeholders was completed to identify the most relevant learning outcomes as well as those points within the medicines management process where education can most effectively be delivered. Recruitment of multi-professional teams consisting of undergraduate and postgraduate doctors, nurses, pharmacists and allied healthcare professionals was through local publicity. The team developed a three-session simulation based intervention that was underpinned by the SECTORS model for non-technical skills learning and supported by online materials: session one was a simulated ward encounter with multiple medicine related activities; session two was an extended debrief and facilitated discussion; and session three a ‘chamber of horrors’ where participants identified sources of error. Each session was in the simulation suite with 6–9 participants, lasted approximately 90m minutes, and took place over 2 weeks. Full details of the course will be presented.

Results
18 participants were recruited and split into two groups. Likert scale feedback was collected after the course (1 strongly disagree-5 strongly agree). Mean scores were all greater than 4, with the highest rating for the statements ‘My practice and management of medicines will change after this training’ (Mean 4.6) and ‘I now have a clear understanding of how teamwork can impact on medicines management’ (Mean 4.8).

Conclusions
An original, simulation based, inter professional training programme has been developed for medicines safety with learning and assessment materials available for replication. This intervention could be modified to address non-technical skills in other contexts.
Non-technical skills learning within inter-professional healthcare simulation: An ethnographic study

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Background
Non-technical skills’ are social (communication and team work) and cognitive (analytical and personal behaviour) skills that support high quality, safe, inter-professional care. Whilst there is much contemporaneous research that reports the delivery of non-technical skills education in healthcare education, much has transposed techniques from other industries. There is minimal primary research investigating how and why learners acquire such skills within the health education setting. Most studies of non-technical skills learning in healthcare involve homogenous teams of professionals and so do not fully explore the authentic inter professional use of these skills. We set out to investigate this through an ethnographic study of a non-technical skills inter professional simulation programme.

Methods
We conducted an ethnography study of non-technical skills teaching within a medicines safety simulation course. Learners were from medicine, nursing, pharmacy and other allied health professions. The faculty consisted of permanent simulation unit staff, as well as doctors, nurses and pharmacists who delivered on ad hoc basis. Researchers observed and video recorded teaching sessions and conducted interviews with participants. Additionally, field notes of faculty debrief feedback and analysis sessions were kept, allowing triangulation of the resultant data. Concurrent, iterative data collection and analysis enabled sampling to saturation.

Results
Three key themes emerged from the analysis. The first was enhanced team working leading to greater error awareness. This was underpinned by an enhanced understanding of other professional’s roles and therefore insight into how tasks can and will impact on each other. The second was improved communication, particularly within hierarchies and amongst inter professionals, with lines of dialogue described as open and continuous, rather than just in times of safety concern. The final theme was one of responsibility in a human factors healthcare system, with participants both describing acceptance of a blame-free view of error and yet communal shared responsibility with all colleagues for preventing error.

Conclusions
Ethnographic studies of natural and authentic inter professional teams has highlighted key non-technical learning themes. These can be used to inform future educational design and refine existing conceptual models.
Is multi-disciplinary simulation teaching a useful way of teaching prioritisation and on-call skills?

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Background and Purpose
It has been shown that 40% of UK medical students feel un-prepared for their foundation jobs (1). A key reason for this is lack of experience in prioritisation and on-call skills (2). This has been postulated as a contributing factor to increased death rates in patients presenting when new doctors start in august and presenting during on call periods e.g. weekends (3) (4). Busy on-call shifts often result in friction between nursing and medical teams due to difficulties managing workloads and increased stress levels. Promoting effective multi-disciplinary communication will likely reduce this.

Currently medical and nursing students in the region receive little formal teaching on prioritisation and on-call skills. Similar successful teaching programs have been implemented in Dundee and Newcastle with excellent results. We are piloting a new collaborative program between Bristol University and the University of the West of England aiming to deliver multi-disciplinary simulation teaching to a cohort of approximately 80 medical and nursing students.

Methodology
Two mock wards will be created with simulated patients and a variety of on-call jobs. Nursing students will take turns running the wards and working as HCAs doing observation rounds and presenting the ward sister with jobs. Medical students will take turns working as the junior doctor on-call triaging bleeps and undertaking a variety of jobs. Nursing students will be encouraged to contact the doctors on-call to ask them to assess patients they are concerned about. Handovers will be given to all students at the start of the session and between role changes. Nursing and medical students will meet at several ‘time out’ points during the simulation to discuss issues that have emerged and to come up with suggestions and solutions.

Results
Qualitative data will be collected from medical and nursing students about the session and how useful they feel it is. Focus groups of nursing and medical facilitators will be held to discuss the merits of the session and how it could be improved.

Conclusion and Discussion
We hope that the teaching program will better equip medical and nursing students for the challenges of on-call shifts. By better understanding others roles, challenges and limitations we hope that more effective interdisciplinary communication will be fostered. In turn this will result in better patient care and increase patient safety.

Following the project we will assess the feasibility of rolling out the program for other students in the region.

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(4) Keogh B et al (2013) NHS seven days a week forum, Evidence base and clinical standards for the care and onwards transfer of acute in-patients.
‘Reactive In-situ simulation’ – a shift of focus from perceived educational needs to real problem-solving

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Background:
All 5 of the assumptions on which the principles of Andragogy(1) are based, support the idea that for truly effective teaching, adult candidates should be involved in activity planning and the definition of intended learning outcomes. In particular ‘orientation to learning’ – the assumption that adults are willing to learn if they perceive the education to be directly transferrable to their workplace activities – is key.

In-situ simulation(2) has been growing in popularity throughout healthcare systems internationally over the last few years(3). This type of education aims to improve human factor error in the workplace by analysing team-working and communication skills as well as leadership. Clinical knowledge and practical skills can be taught this way and latent errors can be illustrated and corrected without compromising patient safety(4).

Traditionally the objectives of a simulation session have been set ‘top-down’ (by the facilitator(s), often senior medical staff) using constructive alignment theory(5) to achieve intended learning outcomes. This novel study intends to empower multidisciplinary healthcare staff to identify their own educational goals and will evaluate the utility of a new ‘bottom-up’ led simulation programme.

Method
A pilot programme of ‘reactive’ in-situ simulation has been started this month to occur bi-weekly over a 6 month timeframe. A ‘suggestions’ box has been provided for Labour Ward staff to describe real scenarios suitable for simulated revisitation. Staff have three options when describing a situation they would like simulated. They can remain anonymous, ask to observe/facilitate the simulation or to be a candidate in the re-enactment. Scenarios will be developed by the simulation fellow based on the real events with elimination of any confidential patient information. After each debriefing, a summary of learning outcomes will be emailed to the department for comment and wider education.

Results
For participants willing to be named, a questionnaire will be distributed, measuring the value of revisiting the scenario in a simulated environment, and any effect on stress and ongoing emotional response to the real situation. Generic simulation feedback forms will be used and results compared with feedback from traditional in-situ simulation which will occur on alternate weeks. After 6 months the department as a whole will be questioned regarding the educational and psychological value of this project with an aim to expanding out across other departments if successful. Results will be available for presentation at ASME in July 2015.

A Multidisciplinary, Multi-specialty Course Designed to Improve Care Throughout the Patient Pathway

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Background
Patients with acute gynaecological conditions are mostly cared for by specialist ‘early pregnancy’ clinics(1), however these are rarely functional out-of-hours. The responsibility for the care of these patients falls therefore to the staff of the emergency departments and on-call gynaecologists.

Foundation and GPVTS doctors rotate through Obstetrics and Gynaecology departments for 4-6 months. There is significant specific knowledge needed to work in this specialty, a lack of which often daunts new junior doctors. Emergency department doctors and nurses rarely have specialist gynaecological clinical experience. A patient may spend up to 4 hours under the care of the emergency department before either discharge or admission under a gynaecologist.

Providing appropriate education for all staff on the frontline involved in the care for these patients could reduce anxiety and work-related stress and optimise patient safety. It could also help reduce the workload of the senior colleagues supporting the new doctors.

Method:
GynA+E is a novel multidisciplinary course designed for Emergency Department doctors and nurses alongside new gynaecology junior doctors to improve their understanding of acute gynaecological disorders and their confidence and competence at managing them. The course combines didactic teaching with interactive group based activities and simulated scenarios to meet the educational needs of all healthcare staff potentially involved along the patient pathway.

Results:
On a Likert Scale of 1 (disagree strongly) to 5 (agree strongly), candidates felt that the training material was relevant and useful (mean score 5), felt it was a worthwhile investment of their time (mean score 5) and felt that they would be able to use new skills and knowledge in their workplace (mean score 5). They felt that there was the correct balance between lectures and interactive simulation sessions (mean score 5).
Prior to the course, candidates scored their confidence in managing acute gynaecological presentations on a scale of 1 (deeply unconfident) to 10 (extremely confident). The pre-course mean confidence was 3.2/10, post course this had improved to 6.9/10.

Conclusion:
When training staff and providing specialist services, the whole patient pathway must be considered. Educating the frontline staff is vital for appropriate and timely referral and management of acute gynaecological conditions and can improve patient safety. The course was oversubscribed suggesting that staff are aware of their limited knowledge and eager to receive education to improve their confidence in patient care.

Attitudes of medical students to interprofessional peer-teaching by students from allied health professions: An evaluation

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Background
The C21 curriculum redesign at Cardiff University moved several core skills to a much earlier point in the curriculum, using a Case Based Learning format. This required teaching obstetric examination and mechanism of labour to 300 medical students within the confines of two half-day sessions. This created an opportunity for interprofessional learning, by involving final year midwifery students in facilitating this skills learning for these students. Previous studies have shown a lack of understanding of the role of these professions in the delivery of patient care.

We wished to evaluate the attitudes of both sets of students on this new approach.

Methods
The session involved student midwives facilitating small groups of medical students undertaking examination in a simulated setting. A paper based evaluation tool was developed, containing both defined options and free text answers. This was handed out during the session and collected immediately afterwards. The midwifery students were surveyed online in the weeks following the session, with a mainly free text evaluation form.

Results
In total, 236/300 medical students (78.6% response rate) and 27/30 (90%) midwifery students responded. Content analysis of free text results revealed that overall both groups of students found this a valuable and rewarding experience. When asked specifically about peer teaching the vast majority were in favour in both groups. The fact that the teachers were from an allied health profession was seen variably as ‘excellent’ and ‘great idea.’ There were no overt negative reactions – the worst was ‘no different from being taught by anyone else, more about quality of teaching than who.’ Additionally, there was no evidence of the commonly held belief that midwives are subordinate to doctors. Midwifery students reported that they found it a valuable experience both in building their own confidence in their subject and in teaching. Both groups reported that they understood more about the multidisciplinary team approach by the end. Data analysis is ongoing.

Conclusion
This experience serves to develop the medical students understanding of the multidisciplinary team. The midwifery students clearly understood this already. In addition allowing the midwifery students experience of teaching in a safe environment reducing future anxiety in the workplace. Future relationships may benefit from this approach. Evaluation supports continuation of this method in future iterations of the case, and perhaps consideration of extending this to other areas of the curriculum.

An Innovative, Inter-professional, Health Coaching Project in the Community

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Background and Purpose
This project, funded by Health Education North West London, was developed to give third year medical and nursing students an opportunity to work in pairs, in longitudinal community attachments coaching a patient caseload (identified as high risk of unplanned admissions) over a four month period starting in September 2014.
This project is exploring the benefits of undergraduate inter-professional learning and determining whether Health Coaching delivered by students increases patient enablement.

Methodology
Inter-professional learning will be assessed using the questionnaire that is based on a widely tested and validated student survey for IPL, the Readiness for Inter-professional Learning Scale (RIPLS) questionnaire\(^\text{(1)}\). These questionnaires will be completed pre and post the project by the participating students and in addition compared to controls. The participating students will also be invited to attend a Focus Group.

Patient enablement will be measured by a pre and post PAM (Patient Activation Measure) validated questionnaire\(^\text{(2, 3)}\) and the scores will be compared to population baseline PAM scores.

Results
The project is currently in progress with final student-led Health Coaching consultations being completed in February 2015 and a Focus Group to be held after their final patient encounters. We are planning to present an outline of the programme and preliminary findings from initial analysis and evaluation of the project, which will be in the process of being written up.

Discussion and Conclusions
There is little evidence in the literature to date about the efficacy of such a project. If we can show positive outcomes on both patient enablement and inter-professional learning, then this offers exciting possibilities for integrating this into core medical and nursing curricula in the future.

\(^\text{(1)}\) Parsell, G. Bligh, J. The development of a questionnaire to assess the readiness of healthcare students for inter-professional learning. \textit{Medical Education} 1999; 33: 99-100
Asking students and staff about what medical students should reflect on in an undergraduate ePortfolio? Outcomes from student and staff partnership research.

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Background
The GMC Revalidation framework challenges educators to prepare medical students for a lifetime of self-awareness and accountability for professional practice. Revalidation is a process through which qualified doctors demonstrate that they are up to date and remain safe, enabled by reflection on learning to enhance clinical practice but also as a process to identify underperforming doctors.\(^1\) Different types of material are either a requirement or selected by the doctor to support the revalidation process.\(^5\) Relevant professional, interprofessional, ethical and competence for safe practice lend themselves for undergraduate reflection; we have used interprofessional reflections as we progress our understandings.

There is limited literature on what medical students and faculty agree on the content for measuring professionalism in an undergraduate portfolio.\(^7\)

Methodology
i) Using qualitative methods (content analysis of Portfolios and on-to-one-interviews), we have analysed the interprofessional reflections of students qualifying in 2010.\(^6\)

ii) We are progressing this study with student researchers to ask; how do medical students frame their understandings from their theoretical and clinical training to demonstrate progression and competence in becoming a professional doctor? What help do medical students need to do this? This study also uses qualitative methods with medical student focus groups and one-to-one interviews with faculty, analysed using thematic analysis.

Results
Of the (i) interprofessional reflections 40 portfolios were analysed and 14 medical students were interviewed. Medical students could write about new knowledge, skills and attitudes for intended behaviours following interprofessional learning at the beginning, middle and end of their course. These began with learning about human behaviours and differences and progressed to valuing differences and collaborative working. The interviews identified how students only reflected on taught courses making few links to their practice placements. They had difficulty writing about skills and behaviours and how they changed over time but felt they could write and reflect more easily towards the end of their training. (ii) Research medical students are collecting data from January 2015. We will report on the main themes emerging in 2015.

Discussion
We aim to arrive at an agreed reflective content for a summative Professional Portfolio for Safe Practice which can be used both as a feedback tool and a means of assessing professional performance. We anticipate the need for faculty development as we progress.

References
Interprofessional simulation (IPS) to promote positive attitudinal change towards patients with mental health needs

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Background
Simulation in psychiatric education is an emerging field. We have developed a number of interprofessional mental health simulation courses with the aim of improving healthcare staff’s skills, knowledge and confidence. These courses bring together professionals from mental health, acute, primary and social care settings. There is little research on the ability of IPS to alter professionals’ attitudes towards patients, or their roles and responsibilities in their care. This is particularly important for patients with mental health needs where evidence has shown stigmatised attitudes in healthcare professionals [1,2]. We are, therefore, modifying our existing scenarios and debrief techniques in order to deliberately effect positive attitudinal change. By incorporating specific measures of this into our evaluations, we are attempting to examine IPS’ ability to achieve this outcome.

Methods
Important mediators in promoting attitudinal change in IPS include identification with the standardised patient (SP), and activation of affective processes, such as empathy [3,4]. This can be understood using cognitive dissonance models [5], and has altered our approach to scenario design. In clinical practice, we may not always identify with our patients. Similarly, empathy can be hard in the face of some behaviours associated with mental health difficulties. Popular debrief models have not previously explored this [6,7]. This has led to us developing new debrief techniques, including deliberate promotion of a mentalising stance [8]. This specifically aims to encourage participants to think about the thoughts and feelings underlying patients’ and colleagues’ behaviours, as well as their own. We are further enhancing mentalisation by allowing participants to hear from the SP post-debrief, thereby reinforcing the patient’s perspective. We have adopted a mixed methods approach to measuring attitudinal change which includes: qualitative data from live debriefs, focus group and post course questionnaires; and pre- and post-course Likert scales.

Results
Across all of our courses we are observing positive shifts towards more understanding of and compassion for patients with mental health needs, along with an acceptance of professional roles and responsibilities towards them.

Conclusion
Measuring attitudinal change comes with particular difficulties. Any change achieved by simulation may not translate into the clinical arena. This necessitates analysis of participants’ subsequent behaviours at work. The features of scenario design and debrief methods that promote attitude change have yet to be firmly established. More data is required, as is refinement of the data collection tools. However, our preliminary data suggests that simulation can be used to achieve this outcome.

References
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Exploring the nature of interprofessional education (IPE) provided in education and training programmes in the United Kingdom

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Interprofessional education (IPE) is a core part of the education of medical students and helps prepare students to engage in multi-professional team-working. This is clearly indicated as an undergraduate training outcome by the General Medical Council in *Tomorrow's Doctors* (2009) and in *Good Medical Practice* (2013). IPE has been defined by the centre for the advancement of IPE (CAIPE) as occurring “when two or more professions learn with, from and about each other to improve collaboration and the quality of care” (2013). It is therefore vital the multiple professional regulatory bodies have similar requirements for engaging their students with IPE to ensure that this process occurs homogeneously. There is not currently a consistent framework for IPE within the organisations regulated by the Health Care Professions Council (HCPC). As a result this study was commissioned by the HCPC to review the current IPE provision within their professions and to provide insight from current good practice as a basis for future recommendations.

Data have been collected through a variety of methods: There has been a systematic literature review of current literature relating to provision of IPE within HCPC registered professions. Telephone interviews with 20 key selected individuals with relevant experience of IPE provision within HCPC and higher education institutions (HEIs). An online survey of all HCPC registered training providers (n=250). Case studies in five organisations identified as having good, established IPE practice have also been undertaken.

Analyses are being conducted using SPSS and NVivo, both to gain an improved understanding of the extent and nature of IPE and also to identify and analyse different types of IPE activities in education and training. The study has also explored the nature of evidence about the impact of IPE. As part of the research, a taxonomy of IPE has been developed and will be discussed.

The presentation will aim to show how the implications of this research will provide a central knowledge base from which IPE in undergraduate medical, HCPC and other professional education will benefit.
Peer Observed Interprofessional Simulation for Medical Students and Nursing Students

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Introduction
Medical students at the University of Aberdeen and nursing students at the University of Stirling spend little time learning with the other healthcare professionals with whom they will work most following qualification. Inter-professional simulation between nursing and medical students has been shown to improve student perceptions of the other profession (1). Improvements have also been shown in students’ communication skills and teamwork (2).

Aim
To assess if peer observation of high fidelity simulation is an effective way of teaching interprofessional working between medical and nursing students.

Methods
10 second year nursing students and 5 final year medical students will participate in a high fidelity simulation involving the management of an acutely unwell patient. The simulation will be divided into five 20 minute sections, each being managed by a group of two “nurses” and one “doctor” who will hand over to the next pair to complete the next section of the scenario. Each section will contain tasks commonly completed by doctors and tasks commonly completed by nurses. The “doctors” and “nurses” will work together to manage the patient. The students not taking part in the section taking place will observe by video with a tutor present to discuss learning points. Written feedback will be obtained from the students after the session using 5 point Likert scales and free text comments.

Results
Planning of the simulation is complete and two sessions have taken place. Student feedback so far has been very positive with students reporting that they found observing their peers useful (mean Likert score 4, range 3-5). They also reported feeling better prepared to work with (mean Likert score 4, range 3-5) and more confident in communicating with (mean Likert score 4, range 3-5) other health care professionals as a result of the session.

Conclusions
Two further sessions will take place. After this feedback will be analysed using SPSS to analyse the Likert scales and thematic analysis to analyse the comments. From results obtained so far, feedback indicates that students find observation of their peers an effective way of learning interprofessional working.

References
Patient Feedback in Clinical Exams

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Background and Purpose
Junior doctors have a professional obligation to communicate well with their patients and should aim to make the patient feel confident in their care. The 2005 joint publication from the GMC and PMETB, Principles of good medical education and training, states that ‘Providers of assessments should have a procedure for involving patients … in developing assessment tools.’ With this push nationally for patients to be more active in medical student assessment a feedback tool in the form of a patient questionnaire was developed at RUH Bath. The purpose of the work is to increase the use of constructive patient feedback in the curriculum in line with recommendations provided by the GMC.

Methodology
The project asks patients who participate in clinical exams to complete a written questionnaire which is then given to the student for personal learning and inclusion in their portfolio. The questionnaire asks the patient to rate the student numerically and provides free-text boxes for personal comments. This has been piloted with a data set of 43 students who were then asked to complete an online survey assessing the benefit of the feedback. Ethical oversight was provided by both the hospital and university.

Results
81% (n=43) of forms were returned and generally scored the students as good or excellent. The ‘white-box’ questions uncovered recurrent themes around patient’s perceptions, feelings and experiences which are under analysis. When asked how they felt about having the opportunity to give feedback all responses were positive with many patients expressing a feeling of pride in helping to train future doctors. Results from the student survey are still being submitted. Emerging themes include: valuing feedback, belief it will make them a better doctor and desire for more patient feedback.

Discussion and Conclusions
There is a national incentive to including patients in assessment of medics at under and post graduate level. This method proved effective without being labour intensive for the examiner or patient. Patients were very positive in the scoring which is unlikely to be useful in marking the student, consistent with previous research. The free text boxes provided insightful feedback for students which worked to build their confidence and identify areas to improve. Patients enjoyed the opportunity to provide feedback and help train the next generation of doctors. In the future, following statistical and thematic analysis of responses, recommendations will be made on scaling up the project across the university.

References
Introducing Patient and Public Involvement to the selection of medical students, quality processes and governance of a Medical School

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Background and Purpose
The General Medical Council have produced a supplementary guidance document \(^1\) to Tomorrow’s Doctors \(^2\) to further detail how Medical Schools should engage with patients and the public. The document acknowledges public involvement is challenging especially within governance but nonetheless involvement in this area has the greatest potential for constructive input influencing strategic decisions \(^1\). Challenges include the risk of tokenistic involvement \(^1\), ensuring that individuals have the required expertise and confidence to deal with technical content and wide ranging issues whilst still being representative of the patient population \(^1\). This presentation outlines Keele University School of Medicine’s experiences in introducing Patient and Public Involvement.

Achievements and Challenges
The recruitment process resulted in over 60 expressions of interest and was supported by role outlines and skills profiles. Interested applicants were interviewed in a semi-formal interview setting by a small panel of faculty. 38 successful applicants were taken forward and completed a training program to prepare them for their role.

Lay members sit on 12 School committees including student disciplinary panels. Challenges have included helping lay members to be involved in committees with technical content or large membership. Nonetheless the addition of lay membership on student disciplinary panels has been particularly positive.

Additional public involvement has included using ‘lay interviewers’ of prospective medical students and including lay members on Service Increment for Teaching (SIFT) visits. A Patient and Public Involvement (PPI) Group has been established to consult the public on issues within medical education (selection, professionalism, the future doctor). Feedback from lay participants has indicated that this forum is an effective way for participants to give their patient/public view and to influence the development of medical education (100% agree).

A future challenge is to balance training and support requirements with the risk of members becoming ‘non lay’. Ensuring that our group of lay members reflects the local patient population is key. Helping lay members to meet the technical knowledge demands of some committees and of future activities will also be a priority.

Evaluation and Quality Monitoring
Results from questionnaires and focus groups giving a lay, faculty and student perspective on our current and future public involvement, including their views on the impact and challenges of public involvement, will be presented. Lay member views on what they think we should be doing, why they got involved and what they get out of it have been considered.

References
Patients as examiners: How can patient opinion be integrated into summative clinical assessment?

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Introduction
The role of the patient in medical education is diversifying from passive provider of signs and symptoms to active, expert facilitator. There is renewed drive to offer medical students realistic scenarios therefore patients are an ever more valuable component of the undergraduate curriculum. A recent review of literature has recognised patient involvement centres on procedural and communication skills but there is very little research on the role of patients in curriculum development or formal assessment. At Bristol medical school students undergo observed long case examinations that are marked by a senior clinical examiner. An assessment of behaviour towards the patient contributes to the final mark. The patient may informally comment on their experience but this will not directly affect the overall mark. This project is in development and aims to assess how patient’s opinion of behaviour correlates with examiners in order to determine how this can be incorporated into the mark scheme.

Methods
Following long-case examinations for year 3 and 5 medical students each patient was provided with a feedback form consisting of five statements with a 5 point Likert scale relating to the students behaviour and a sealable envelope. The examiner scored the students behaviour as ‘Fail, borderline, clear pass, good pass, excellent’. As the scales were not directly comparable we used variation from the mean to assess the degree of correlation between patient and examiners scores.

Results
Twenty five responses were analysed. On average the examiners marked behaviour as a ‘good pass’ (average score 3.5, SD +/- 0.3) and patients choose ‘strongly agree’ for positive statements about students behaviour (average score 4.87 SD +/-0.22). Limitations of this pilot include a small data set, difficulty comparing scales and lack of low scoring students. From this sample group, we can generally state that patients’ views correlate with examiners.

Discussion
It is accepted that patients have an integral role to play as stakeholders in our hospitals. We suggest they are also stakeholders in the doctors of the future and we should therefore be considering how to involve patients in the feedback processes and assessment of medical students. What form this should take and how it can be reliably achieved remains a challenge. This project requires further development to minimise current limitations and the authors will look to other intuitions and medical educators for opinions on this topic.

References
Do medical students see older patients through different lenses?

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Background and Purpose
The increasing longevity of the human population in western countries implies that doctors will be making increasing number of contacts with older patients. Social sciences research has described that humans hold negative reactions to the elder population, a phenomenon that has been coined “ageism” by Robert Neil Butler in the early 70s. This phenomenon is institutionalized in societies and manifests itself in several aspects of social life. Health professionals' negative attitudes towards older people affect the quality of health care offered to these individuals. The willingness and the difficulties of medical students in developing physician-patient relationships older patients is largely unknown. This study aims to identify the social representations of medical students towards older people in students of one medical school in Portugal.

Methodology
We are using semi-structured interviews to capture the social representations of preclinical medical students on the older population and on the relationship with an older patient. The interviews are audiotaped and transcribed verbatim. Texts are submitted to content analysis and interpreted using an inductive methodology, based on data (Grounded Theory).

Results
At the moment, we have performed 11 interviews with 3rd year high school entry and with 1st year graduate entry students at the same phase of the curriculum in the same institutions. The representative positioning of the interviewees is ambivalent, but we could find negative social representations of the population with 65 or older. They are seen as frail and dependant persons, individuals with memory problems, and depressive symptoms as well as isolated and lonely persons. Results suggest that opportunity structures for interaction with grandparents or other close older persons do not necessarily translate into positive representations. The current results suggest that graduate-entry students have more positive representations than high-school entry persons.

Discussion
The representations of medical students may be an obstacle to offer older people patient-physician relationships or equitable treatments. The characterization of ageism among medical students is a first step towards the development of physicians who treat patients of this sub-population alike all the others. Identifying the representation of older people by medical students is the primary goal of this study.
Addressing the elephant in the room: mobile technology in the workplace—what do our patients think?

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Background and Purpose
Over the past decade there has been speculation surrounding how patients might perceive the use of handheld computers, smartphones and more recently tablets\(^1\,\,2\,\,3\) by doctors or medical students. Indeed, those studies that have investigated various devices and their use within student or doctor groups have frequently sought the user’s view, but not those of the observing patient. The primary objective of this study is to explore the opinions and attitudes of hospital patients towards doctor and medical student use of mobile technology in clinical settings.

Methodology
Inpatients at Gloucester Royal Hospital were invited to participate in the study via information sheets. These were delivered to each ward over a set period. Instructions on the sheet advised those interested to liaise with the nurse in charge. The nursing team informed the researchers of potential participants who had identified themselves. Recruitment was thus via self-selection. All consenting participants were subject to one semi-structured interview exploring their opinions and attitudes towards the use of smartphones and tablets by doctors and students in the clinical environment. All interviews were transcribed and reviewed within the team. Where possible member checking was enforced (the process of returning transcripts to participants for review, maintaining validity). Thematic analysis to saturation point was undertaken.

Results
Patient attitudes and beliefs on mobile technology use by doctors and medical students will be presented. Analysis will be complete by July 2015.

Discussion and Conclusions
Few studies have actively considered the views of patients in relation to the widening use of mobile technology in the workplace. The importance of this is clear as smartphone and tablet ‘apps’ for use in clinical settings increase and the potential uses of these devices for doctors expand. Several universities have also expressed interest in developing curriculum specific ‘apps’\(^4\)-many of which would require use in clinical contexts e.g. clinical skills logbooks and clerking portfolios. The present study adds to the literature by addressing the patient’s viewpoint on smartphone and tablet use by doctors and students in clinical settings for the first time.

References
Postgraduate Education
Factors Influencing Recruitment and Retention of Foundation Doctors in geographically unpopular locations

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Background:
Following medical school all UK graduates are required to complete 2 years of Foundation Training before entering into specialist training. The North West Foundation School is home to 1100 Foundation trainees employed over 12 hospital trusts in the North West of England. Despite oversubscription to the Foundation Programme year on year since 2011, University Hospitals of Morecambe Bay Foundation Trust (UHMBFT) has the lowest entry requirements in the North West region in order to sustain a place, however it has struggled to fill training posts in Foundation training over recent years. There is therefore a greater reliance on locum doctors to sustain service provision along with implications for increased recruitment costs, deficiencies in patient care and low morale for permanent staff.

Methods
A research study was therefore undertaken to explore the reasons for this and identify possible solutions. Final year medical students at Lancaster University as well as Foundation doctors based at UHMBFT and Central Manchester Foundation Trust (CMFT) were invited to complete a structured questionnaire and then attend a focus group to expand on their answers.

Results
Location was identified as the single biggest factor which affected where Foundation applicants applied to. Followed by perceived reputation of the hospital trust and job track. Participants identified free/heavily subsidised accommodation, the offer of additional qualifications in leadership or teaching would have a positive effect on applications to geographically undesirable trusts. These incentives would need to be well publicised, particularly on Foundation school websites, UK Foundation Programme websites and trust websites. Overall this should lead to savings in recruitment costs, a reduction in vacant training posts and thus a decreased reliance on locum doctors, culminating in improved patient care.

Key Messages
Geography cannot be changed however in order to provide consistent, good quality patient care, unpopular trusts need to attract and retain good doctors. Investment in incentives, that foundation doctors themselves have identified as attractive, is thus required.

References
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Factors influencing career choice, recruitment and retention of UK Anaesthesia trainees

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Background
Many acute hospital specialties are experiencing low recruitment and high attrition of trainees. These difficulties impact on the reliable delivery of care and hence patient safety in the immediate term, and have massive long-term implications in the longer term, in relation to too few trainee doctors progressing to consultant grade. In order to attract and retain trainees, it is essential to identify those factors which attract trainees to particular specialties, as well as factors within the posts which may impact on retention. We examined this in one specialty suffering difficulties with retention: Anaesthesia.

Methodology
This mixed-methods study utilised a questionnaire survey and qualitative interviews to identify and explore factors involved in career decision making in those beginning anaesthesia training in Scotland, UK, in August 2014. Trainees (n=68) were contacted by email from The Scotland Deanery with an invitation to participate and a link to the online survey. Individual, semi-structured, telephone interviews were conducted with a sub-group of survey respondents. Responses to survey questions were analysed using descriptive and non-parametric statistics. A framework analysis approach was used for the interview data. Ethics approval was obtained for this study.

Results
Forty-two completed responses were received, a response rate of 62%, representing trainees in all four Scottish regions. Of these, 19 (45%) agreed to follow up interview. Thirteen qualitative telephone interviews were carried out. The survey data highlighted that trainees in this study seek structured training, including clear milestones, regular teaching and feedback, and place great emphasis on concerns of a shift toward service delivery and its impact on training. Although our study population placed less importance on working patterns and antisocial hours, staffing levels and sustainability of working conditions were considered important. These findings were supported by the themes occurring in the interview data. However the interview data provided additional information on the importance of early exposure to the specialty and the impact of early experiences of enthusiastic anaesthetists and its effect on career decision making. An enthusiastic and supportive team is also considered to improve the quality of training.

Discussion
This study provides insight into factors affecting decision making amongst anaesthetic trainees within Scotland. We identified elements within training which seem influential in terms of remaining within the specialty. These findings can inform policy and practice in terms of planning and advertising training posts, and supporting trainees.
Can trainees’ views D-RECT quality improvement in postgraduate training in Ireland?

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Background and Purpose:
Trainees learn to be a doctor in the workplace. Management of the curriculum for postgraduate training must take account of the role of clinical learning environments in supporting learning outcomes. However, there is no routine, comparable and useful information available to evaluate this aspect of the postgraduate curriculum in Ireland. The Medical Council’s first trainee experience survey sought to collect exactly this type of information.

Methodology:
Invitations to participate in a cross-sectional, closed-ended, online survey were issued to all 3000 doctors registered as trainees with the Medical Council in April 2014 (attracting a 54.5% response rate). The D-RECT instrument was used to measure trainees’ perceptions of clinical learning environments; with resulting D-RECT scores ranging from 50-250 (higher scores denote more supportive learning environments). Trainees’ views were compared with expert-expectations (which were captured through a modified version of D-RECT). Variations in trainees’ views were analysed by trainee and clinical environment related characteristics (e.g. trainees’ gender, stage of training, and the type of clinical environment in which they were learning).

Results:
The mean total D-RECT score for all trainees was 171, thirty three points fewer than experts’ expectations (204). Large and significant variations in D-RECT scores were identified across a number of trainee and clinical environment related characteristics, including stage of training and clinical site type. Interns reported a significantly lower D-RECT score (M=152) than doctors on Higher Specialist Training (M=181). Trainees based in larger hospitals produced a significantly lower D-RECT score (168) than trainees in Mental Health Services (M=191).

11 constituent components of clinical learning environments were also assessed by D-RECT (with each component rated on a scale 1-6). Trainee views on strengths and weaknesses were identified. Weaknesses included feedback (M=2.3) and the role of the educational supervisor (M=3.3). Strengths in learning environments included peer collaboration (M=3.9) and consultants’ role (M=3.8).

Conclusion:
Trainees’ reported experiences of clinical learning environments for postgraduate training in Ireland falls short of the ambition set by experts. Gaps and weakness in some basic teaching and learning processes are identified. The variation in trainees reported experience points to an urgent need for stronger and more consistent quality control of clinical sites as learning environments. Repeated use of D-RECT in annual trainee surveys will help show if resultant quality improvement strategies help develop more supportive clinical learning environments.

References
Ensuring a good-start to the experience of postgraduate learning at clinical sites in Ireland.

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Background and Purpose
Effective induction and orientation at clinical sites are important for trainees, as both employees and learners. Routine, comprehensive and comparable data on trainee's experience of induction and orientation are not available in Ireland. The Medical Council sought to address this deficit through “Your Training Counts”, the National Trainee Experience Survey 2014.

Methods
Invitations to participate in a cross-sectional, closed-ended, online survey were issued to all 3000 doctors registered as trainees with the Medical Council in April 2014 (attracting a 54.5% response rate). Trainees’ experiences of induction and orientation were assessed using items developed by the General Medical Council. Variation in trainees’ views were analysed by trainee and clinical environment related characteristics, and compared with their overall view of the clinical site as a learning environment (as measured by D-RECT, which rates clinical learning environments between 50-250, with higher scores denoting more supportive environments).

Results
While 61% of trainees viewed the overall quality of induction as good or better, 17% of trainees rated the quality of induction as poor. Many trainees reported specific gaps in core aspects of induction to clinical sites, as both a workplace and as a place for learning; 44% of trainees had not discussed educational objectives with their educational supervisor in their post, and 29% of trainees did not have someone explain their role and responsibilities at the start of their post.

Variations by trainee and environment related characteristics were identified. Interns were significantly more likely to say they did not have their role and responsibilities explained to them at the start of their post (46%) than doctors on Registrar Training (18%). 49% of trainees in smaller hospitals considered their induction to be 'less than good' compared to 16% of trainees in GP practices.

Analysis of D-RECT ratings showed that poorer experiences of induction and orientation were significantly associated with poorer overall experiences of clinical learning environments. Trainees who discussed educational objectives with their supervisor at the start of their posts attracted a mean D-RECT score of 186, compared to a mean score of 155 for trainees that had not had those discussions.

Conclusion
Improvements in the quality and consistency of induction and orientation at clinical sites are required for trainees to succeed in providing safe, high-quality care. These improvements may also enhance their overall experience of postgraduate training.

References
Innovations that develop medical education structures in an East African context – A novel use of OSCE

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Background and Purpose
Postgraduate medical education programmes in this modern teaching hospital in Nairobi, Kenya are consistent with contemporary medical education, using self-directed learning and formative assessment tools. Summative assessments include skills exams in the form of OSCEs. The programme learning outcomes are broadly defined in terms of the specialty specific learning outcomes and generic competencies applied across all specialties. Generic competencies are the skills that all doctors are expected to demonstrate, irrespective of their training specialty.

Each speciality appoints a Programme Director responsible for ensuring educational compliance within their Department; regular meetings provide an overview of educational progress of trainees within the programmes. Programme Directors and faculty are responsible for constructing appropriate OSCE exams for their speciality, writing relevant and appropriate scenarios. This ensures they reflect the local context, and also provides a training opportunity for faculty in designing assessment tools. Programme Directors struggle to find ways of incorporating generic competencies into their OSCE scenarios. Closer examination of the learning outcomes reveals a blurred amalgamation of generic and specialty specific outcomes- the generic competencies being diluted by being placed within a specialty specific context.

Methodology
An action research project began with a focus group discussion with the Programme Directors and relevant faculty to determine what constitute core generic competencies. This was followed by development and refinement of generic OSCE scenarios, by practice and actor training rehearsals for each scenario. This included designing complexities relevant to the stage of training. Critical review of scenarios came from peers and independent assessors. The final critique of the scenarios came within the summative assessments of 2nd and 4th year (exiting) candidates, by external examiners invited for moderation and review of the entire summative exam.

Results
The generic competencies described were remarkably relevant and reflected the local, cultural context of professional practice.

The experience of constructing and implementing a separate summative exam of generic OSCEs, representative of these competencies will be presented, together with developments stemming from the feedback of External Examiners and simulated patients.

Discussion and Conclusion
The context of East Africa, where most faculty and residents come from very traditional models of didactic, directed education, and resources are few, holds a particular challenge for innovation in teaching and leaning. Whilst the Generic OSCE is now firmly embedded as a stand-alone Pass/Fail exam, developing the project brought unforeseen benefits – working across specialities promoted shared learning and teaching, improved team working, and uncovered a rich source of voluntary actors working within the institution.

References
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Pugh D; Touchie C; Wood TJ; Humphrey-Murto S. Progress testing: is there a role for the OSCE? Medical Education; 2014; 48(6): 623-31
Background and Purpose
Since its introduction in 2005 the Foundation Programme (FP) has gone through a number of changes, both to meet the changing health needs of the British population and to better prepare recently graduated junior doctors for their future roles in Medicine. In preparation for implementing the recommendations of the Foundation Programme (1) we wished to undertake a robust review of the educational experiences of our trainees and use this to frame our critique of individual posts and of the programme at ICHT.

Methodology
A mixed methods approach was used, including trainee surveys, and group feedback. Surveys included a mix of closed demographic questions, level of agreement questions and specific questions about individual placement. Responses were collated and thematic analysis conducted on free text comments.

Group feedback sessions were undertaken using a modified version of de Bonos Six-Hats (2) approach. At the end of the session, each note was transcribed and subjected to thematic analysis. Sessions continued until Thematic saturation was achieved.

Results
There was a 90.1% response rate to the survey, with feedback for 194 individual placements throughout the trust. There were 16 themes derived from the group-sessions with thematic saturation achieved after the 3rd session, with no further new themes identified in 2 subsequent sessions. Themes derived from both sources were collected into a common template, and collapsed to form 6 final headings, under which each post was assessed. (3) The final headings were Teaching, Workload/Work Intensity, Work Environment, Organisation of post, Curriculum Targets, Supervision (Clinical and Educational). Each post was given a ‘traffic light’ under each these headings using information from multiple sources and an overall traffic light awarded to that post.

Discussion and Conclusions
Using a ‘six-hats’ approach allowed structured feedback from large groups of people in a short space of time and focused foundation doctors on considering their thoughts on the programme from a number of angles. The combination of both surveys and group feedback allowed a comprehensive overview of training experiences from a Foundation Doctor viewpoint and using the themes that were derived to formulate the ‘traffic-lights’ heading under which each post was assessed ensured the focus was on trainee experiences in that post.

Experiences of Supervision at Masters Level in Postgraduate Medical Education

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Background and Purpose
Previous research on postgraduate students’ experiences of research supervision during dissertations highlights the common occurrence of complaints about and lack of satisfaction with the supervision they have received\(^1\). However, most studies, even those in the health professions, have focused on non-medical students\(^2\). Although there has been general guidance published in this area in the medical education literature\(^3\), there is a gap in the research literature regarding students, especially part-time clinicians, engaged in taught postgraduate Masters level courses in medical schools. This study aims to address this deficit.

Methodology
The aim is to identify and report on students’ experiences of dissertation supervision in taught Masters courses in postgraduate medicine. The end goal is to identify factors which contribute to the success – or otherwise – of the experience of supervision. This includes the following steps:

- A systematic review of the literature
- In-depth interviews with students who completed their dissertations in postgraduate clinically-related subjects within one UK medical school (interpretive phenomenological approach).
- In-depth interviews with supervisors of these and other students who completed their dissertations (interpretive phenomenological approach).
- A combined quantitative and qualitative survey of students and supervisors to establish how the themes and issues identified in the interviews were experienced more widely.

Results
Results from the systematic literature review will be presented, along with emerging primary and abstracted themes from semi-structured interviews with students and supervisors. The themes generated have informed a larger scale survey which, later this year, will be sent to all alumni from Masters programmes in the postgraduate programmes at the medical school over the last seven years. We hope to present data from the latter study in due course, but will present as much of the data and its analysis as is available at the time of the conference.

Discussion and Conclusions
We anticipate that our study will show that there are many important messages for both students and supervisors on taught clinical Masters’ courses in UK Medical Schools with respect to ‘best practice’ in supervision for the part-time clinician or care worker practising in a busy and stressful clinical environment such as the NHS. The specific issues and problems encountered from which others might learn will be highlighted and discussed.

References
Overcoming the barriers to educating junior doctors working in the clinical environment.

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The General Medical Council (GMC) is responsible for overseeing the postgraduate education of doctors in training in the United Kingdom (UK) and is currently reviewing the standards set out in *Tomorrow’s Doctors* (2009) and *The Trainee Doctor* (2011). The GMC identifies the “Learning Environment and Culture” as one of its 4 key framework themes, with healthcare providers expected to provide a safe educational environment for both doctors and patients, where learning is part of the culture, educational governance is prioritised and safe and effective care for patients is delivered [1]. In view of this upcoming guidance we sought to identify barriers to a clinical environment that supports learning for postgraduate trainees in our health board and explored solutions to these.

**Methods**

A literature review was performed to identify themes that informed a series of semi-structured interviews. We identified 3 clinical departments in our health board across a spectrum of performance in relation to the GMC NTS over the last 3 years and conducted interviews with 2 foundation year doctors (PGY 1/2), 2 senior registrars (PGY 7-10), 2 consultants and 1 non-clinical manager in each department. Interviews continued until saturation of themes was achieved. Data was analysed with pattern-matching techniques and thematic analysis with triangulation and occurred alongside data collection.

**Results**

Barriers to education and training in the clinical working environment were identified by participants within 9 themes: 1) Time; 2) Workload/Opportunities; 3) Physical Environment; 4) The learner; 5) The teacher; 6) Organisational Factors; 7) Training System; 8) Supervision/Feedback; 9) Patient Factors. The perceived impact of these factors varied between trainees and teachers, trainees of differing levels and non-clinical and clinical staff. Proposed solutions were suggested in the themes: 1) Developing teachers; 2) Developing learners; 3) Improving organisation of teaching activities; 4) Teambuilding; 5) Improving organisational climate.

**Discussion**

It is inevitable that the busy working environment in healthcare will raise significant challenges to individuals and organisations responsible for education and training. Whilst many of the barriers identified will be unsurprising to practising clinicians, defining the challenges we face is an important first step towards creating an environment that is equally safe for learners and patients. We have also explored solutions for improving the learning of postgraduate trainees, although further study is required to assess their potential impact. Overall it is clear that multiple interventions are required to create the learning environment and culture that will ensure safety for patients and trainees.

References:

1. GMC – Review of education and training standards (not yet published)
The UK Foundation Programme (UKFP) has 2 key concepts, patient safety and personal development, underpinning the curriculum [1]. A common way this curriculum is delivered is through a teaching programme running throughout the foundation years. In NHS Lothian we have geographical challenges that impact on the delivery of teaching the foundation curriculum, with trainees rotating through 3 different health boards, 7 different hospital sites and community placements. We have aimed to improve the delivery of the foundation curriculum through a structured teaching programme across all sites within our health board.

**Methods**
We reviewed our current foundation teaching using data from the GMC national training survey (NTS) and our local annual survey of foundation trainees. A snapshot survey of foundation year 2 (FY2) doctors was used to assess the quality of teaching they had received. Questionnaires contained 5 and 10-point Likert questions and qualitative comments. We then commenced a review of the current foundation teaching programme sessions and learning objectives delivered on each site and mapped these to the foundation programme curriculum.

**Results**
The results of the GMC NTS and our annual survey highlight local foundation teaching as an area for improvement. 32 FY2 trainees completed the questionnaires and the average score for the overall teaching experience was 6.0 out of 10. Trainees also highlighted that they receive repeats of the same session and that resources should be available to catch up with missed sessions. We have now developed a new teaching programme, which contains 6 blocks of 16 sessions that are all tightly mapped to the foundation curriculum. There are also themes that run longitudinally through the entire programme to facilitate continuity of teaching through 2 years.

**Progress**
We will be piloting the new programme at the Western General Hospital in Edinburgh from April 2015, with re-assessment in June 2015.

**Discussion**
Healthcare providers face a number of challenges in delivering a structured foundation programme that meets the learning objectives of the curriculum. A weekly lunchtime teaching session for foundation trainees is a widely used method, although there are inherent difficulties with this modality. We aimed to improve the quality of our teaching programme by providing a structured timetable of sessions, tightly mapped to the curriculum with longitudinal strands to facilitate continuity. We hope that continued development of this model will provide an efficient and sustainable framework of teaching for developing our foundation trainees.

References:
1. The UK Foundation Programme Curriculum (multiple authors), updated March 2014 (first published 2012), The Foundation Programme.
There is a growing movement to teach patient safety and quality improvement and case-based learning has previously been used to deliver patient safety education for foundation trainees in UK [1]. The WHO Patient Safety curriculum has also been designed to assist effective capacity building in patient safety education [2]. We aimed to map our patient safety education programme for foundation trainees in our health board to the common learning objectives of the WHO patient safety curriculum and the UK Foundation Programme (UKFP) curriculum.

**Methods**

We have developed a structured programme of 6, one hour teaching sessions: 1) Introduction to Patient Safety & Human Factors; 2) Introduction to Incident Analysis; 3-6) Case-based discussion of previously reported clinical adverse incidents. The authors NM, EM and BV facilitated structured peer-group discussions with contributory factors analysis of adverse events using the validated London Protocol [3]. A review of both curricula was performed to identify and map common learning objectives.

**Results**

The “Lessons Learned in Lothian” programme is established within the NHS Lothian foundation teaching programme. The new standard session format provides feedback on recent incident reports from foundation trainees, quality improvement initiatives and learning from previous sessions, as well as practising incident analysis, highlighting potential QI interventions and linking to other learning/teaching in the foundation teaching programme. Following delivery of each session, the “Lessons Learned” are collated and distributed to all foundation trainees, to generate shared learning, and map to both the WHO patient safety curriculum and the UKFP curriculum.

**Progress**

Through delivery of the sessions we continue to collect feedback from trainees on their learning and changes in practice that they have implemented following a case discussion. By sharing this learning across sites we aim to stimulate ongoing behavioural changes amongst our trainees to improve patient safety. We also hope to raise awareness of incident reporting and improve engagement with QI initiatives.

**Discussion**

We have demonstrated that it is possible to deliver patient safety education to foundation trainees covering the WHO patient safety curriculum learning objectives. We face similar challenges to previous groups, such as poor learner engagement, but have looked to address these through regular feedback, sharing learning and reporting back to trainees on organisational improvements. Overall we feel that case-based learning is an effective method to deliver patient safety education and that our programme delivers the learning objectives of both the UKFP and WHO patient safety curricula.

**References**

Faculty development in Obstetrics & Gynaecology; a new framework.

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Background & purpose
High quality training leads to better trained and therefore safer doctors. It is increasingly recognized that we can improve how we teach. There is also a need to develop medical educators for more senior roles, alongside a recognition that limited development opportunities are available.

The GMC is establishing a UK scheme to formally recognize and accredit trainers in secondary care settings by 2016, and with the Academy of Medical Educators has been developing a set of standards for educators. Over the past two years the RCOG has been developing a scheme to help doctors in Obstetrics & Gynaecology become better trainers and advance their careers as educators.

Methodology
The aims were to develop, support and professionalize medical educators in O & G and facilitate the development of a RCOG faculty of educators. The RCOG faculty development committee, after consultation, has established a new, and we believe unique, four tier faculty development framework that ensures that all Fellows, Members & Trainees receive RCOG trainer recognition, according to their level of experience and their training roles. The framework has been mapped to the AOME/GMC educator domains & provides guidance on how individuals can develop as educators by identifying opportunities for development.

Results
The framework provides an easy way of recognizing educators, the evidence of which can be used as part of an individual’s evidence for GMC recognition as a trainer. A gap analysis based on the framework has identified a lack of suitable development opportunities, particularly for the more experienced educators. Based on this, there are plans to develop new resources to support trainer development. Communication of educational issues is more focused as the RCOG can identify individuals’ levels of expertise.

Discussion & key messages
Establishing a RCOG Faculty Development framework contributes to the professionalization of trainers by recognizing their expertise and by identifying educator career pathways & development opportunities. It is designed to help and encourage trainers to improve and is a driver for the development of targeted trainer resources. The framework also helps to develop a faculty of educators – a “community of practice”.
Allocation of training posts in Obstetrics & Gynaecology in the East of England using quantitative and qualitative data.

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Background & purpose
Training posts in Obstetrics & Gynaecology in EOE have been distributed historically in a way that did not take into account the opportunities for, and quality of training in hospital units. GMC trainee surveys have highlighted considerable variability in the quality of training across the EOE. In 2012 the EOE also lost four ST1 posts as part of a nationwide reduction of training posts in O & G and there was a need to rebalance the programme at ST3 level. According to the RCOG around 20% of training posts nationally are currently unfilled.

Methodology
The School Board convened a working party (April 2014) to objectively assess post distribution with a remit to improve postgraduate training by redistributing, if necessary, training posts to units where there were appropriate opportunities for training in combination with high quality training. Data fields were agreed based on readily accessible data from the RCOG, GMC and LETB. Quantitative (deliveries, consultants, consultant hours on delivery unit, rota tiers) & qualitative (including GMC trainee survey data, ARCP outcome fiv es, School visits, trainer support to assessment & recruitment panels & Trust safety concerns) data were collected for each LEP.

Results
The working party analysed the collected data and ranked units. A proposal for re-distribution of posts was made based on the data collected and the opportunities for training available. More posts were removed than were added to units to reflect current gaps within units and to more closely align training posts with numbers of trainees. This has been accepted by the School Board, with implementation planned for August 2015. A communication strategy has been developed with all affected units; review of post allocation is planned on a three yearly cycle.

Discussion & key messages
Readily available quantitative and qualitative data was collated to inform a review of quality and capacity for training in O & G in the EOE. As a result training posts are being re-distributed with more training posts in units with evidenced good quality of training and less in units where training is less good. The data and process will be shared with LEPs & other specialities as it provides a template for allocating posts that is transparent and objective.
Videoconferencing (VC) is widely used in continuing medical education, and studies have demonstrated it is an effective and efficient method to deliver teaching in rural settings\textsuperscript{1,2}. However some difficulties have been identified, including poor student interaction and decreased rapport with teachers\textsuperscript{1,2}. In NHS Lothian, VC is used to deliver the lunchtime foundation teaching programme to foundation year 2 (FY2) doctors, based in district general hospitals. Through our quality improvement work we aim to qualify the challenges we face using VC in this setting and implement interventions to advance our delivery of teaching using this technology.

Methods
A review of the literature was performed and a thematic analysis of challenges in using VC for education was constructed. Themes were used to create a questionnaire, consisting of both quantitative (responses on 1-5 Likert Scale) and qualitative questions. All FY2 doctors at our 3 sites participating in VC teaching sessions were asked to complete the questionnaire. We also contacted all teachers involved in delivering VC sessions by email to ask for qualitative feedback on their experience.

Results
Four themes were identified from the literature: 1) Organisational challenges, 2) Technical challenges, 3) Challenges to the teacher, 4) Challenges for the learners. 21 (70\%) of FY2 doctors completed the questionnaire with an overall satisfaction score average of 3.3/5. Likert scores and qualitative comments from participants in our VC sessions support the themes identified in the literature, with technical problems and difficulties for the teacher perceived as the greatest challenge.

Progress
Through our initial questionnaire we have defined the challenges faced by participants in VC teaching and identified areas for improvement. We now aim to implement our first intervention, a technical guide to using the VC equipment before completing the improvement cycle through re-evaluation at the end of the current FY2 rotation in March. We are also developing resources for both teachers and participants, to improve their utilisation of VC for learning.

Discussion
Videoconferencing is an effective method of delivering teaching, but our work to date confirms the challenges presented in the literature that are inherent to this form of education\textsuperscript{1,2}. Defining these locally is the first step to improving the experience for our trainees and teachers utilising this technology. Through this work we hope to overcome a significant challenge presented by the geography of our health board and improve the learning experience of our FY2 trainees not based in a teaching centre.

References
Mock speciality interview pilot for foundation doctors within NHS Lothian.

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Background and Purpose
The current structure of postgraduate medical training often sees doctors applying to speciality training posts directly from the foundation programme. Foundation doctors have minimal interview experience and for many speciality interviews will be their first medical interview. Lack of interview experience and understanding of the interview process leaves many foundation doctors less well prepared for interview than more senior applicants. Our objective was to maximise foundation doctors’ chances of success at interview by providing them with:
1. An opportunity for formal interview practice.
2. An understanding of what is expected at interview.
3. Feedback on their practice performance.

Methodology
Mock speciality interviews were undertaken for Core Medical Training, Anaesthetics/ACCS Anaesthetics and Core Surgical Training. Consultants and senior trainees from each speciality formed the interview panel, doctors moved in carousel through specialty specific stations with dedicated time for feedback after each. Foundation doctors were surveyed and asked to rate (using Likert scales 1 poor – 5 excellent) their understanding of the interview process and their preparedness for interview before and after the mock interview. Qualitative data was also collected from the consultant panel and participants.

Results
24 foundation doctors participated in mock interviews. Across all specialities there was a statistically significant improvement in candidates’ level of understanding (mean Likert rating before 3.0, after 4.7, p<0.05) and preparedness for interview (before 2.2, after 3.8, p<0.05) following the mock interview. Participants felt the experience gave them ‘confidence’ at interviewing, a ‘much better idea of what to expect’ and thought the process overall ‘very useful’.

Discussion and Conclusions
Specialty interviews represent a pivotal moment in foundation doctors’ careers and every effort should be made to facilitate their success at interview. Mock interviews undertaken within NHS Lothian have proven beneficial to foundation doctors preparing for speciality interviews. The level of preparedness for interview reported and enthusiasm towards this pilot suggests it has been worthwhile.

At the time of writing, national specialty interviews are taking place. Following these our 24 candidates will be re-surveyed to ascertain how undertaking the pilot affected their subsequent interview experience. Based on the success of this pilot we plan to incorporate mock specialty interviews into NHS Lothian foundation programme teaching, and additionally will develop a dedicated careers programme to guide our foundation doctors.
Broad Based Training: findings from the ongoing evaluation of pilot initiatives in England

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Background and Purpose
Introduced by Academy of Royal Medical Colleges (AoRMC), pilot two-year broad-based training (BBT) programmes run in six LETBs in England. Following Foundation training, these provide 6-month placements in general practice, core medical training, paediatrics and psychiatry. BBT aims to develop: practitioners adept at managing complex, patient-focussed care; specialty integration; and conviction in career choice. Commissioned by Health Education England/AoMRC, this study evaluates BBT.

Methodology
We are taking a longitudinal, mixed-methods approach using a comparator groups1. We have collected data from the BBT 2013 (n=42 at outset) and 2014 (n=30) intakes, and from comparator groups of CT/ST trainees2 in the four specialties (n=42 for 2013 cohort; n=215 for 2014 cohort). These groups complete baseline and follow-on questionnaires, and take part in focus groups. We monitor trainee progress for an initial period of two years. Ethical approval has been obtained from Cardiff University.

Building on our presentation of questionnaire data last year, we report key findings from 7 focus group discussions: 5 with the first cohort of BBT trainees (May and November 2014); 2 with cohort 2 (November 2014).

Results
There was general support for the broad goals of BBT amongst trainees. In particular, trainees emphasized the value of having extra time to decide on their onward career specialty, to gain a wider medical perspective, and to develop transferrable skills. Notable progress has been made in addressing some trainee concerns relating to organisational, communication and logistical issues (e.g. allocations to post, inductions, and the arrangement of 10% time in other specialties), with cohort 2 trainees reporting a ‘smoother’ passage into BBT training. However, whilst being ‘different’ was portrayed positively in terms of pursuing novel and unique training opportunities within BBT, it was also common for trainees to report feeling like ‘outsiders’ amongst their non-BBT colleagues, suggesting that being different could also lead to feelings of uncertainty around professional identity3.

Discussion and Conclusions
Our data show that BBT is well received by trainees and suggest that some of the organisational teething problems for the first cohort have been addressed for the second tranche of trainees. However, issues pertaining to the professional identity of BBT trainees in relation to those on standard training pathways raise important questions about the status and identity of the generalists described by Greenaway4 and others, and needs further study.

References
‘Transition to Leadership’: evaluating the educational impact of a leadership course for paediatric doctors approaching registrar level

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Leadership and management skills are increasingly recognised as fundamental aspects of doctors’ clinical practice and drive high-quality, safe healthcare services for patients. Availability of specific leadership training is limited for junior doctors with national bodies, including the GMC, calling for increased availability of relevant training. We aimed to evaluate the need for and educational impact of a leadership course for paediatric trainees approaching registrar level.

We ran a three day course for thirty paediatric ST3s approaching registrar level entitled ‘Transition to Leadership’, consisting of two training days within ST3 (SHO) and a third day after trainees had progressed to ST4 (registrar). The course incorporated the NHS Leadership Academy ‘Health Leadership Model’ and covered areas such as delegation, negotiation, supporting junior trainees and leading at night. In addition, key updates were included on safeguarding, consent and end-of-life care. We collected evaluation data from attendees at three time points: prior to the course, after day two, and after transition to ST4.

Paediatric ST3s felt unprepared for the transition to registrar, frequently citing concerns directly related to leadership and management capabilities. Following the course, trainees reported increased competence consistently across eight aspects of leadership and management. Perceived competence in two control aspects not covered on the course was unchanged, indicating a specific effect on leadership skills. Paired t tests demonstrated a significant increase in competence ranking for seven of the eight leadership domains (t23<-2.01, P<0.06 for the seven domains). This increased competence continued after transition to ST4, indicating a sustained improvement in leadership abilities. Trainees attended all 3 days where possible, allowing them to build rapport with other attendees, creating a safe environment to share and discuss concerns, and to gain peer support and reassurance from group problem-solving sessions.

Our Transition to Leadership course was well-received by trainees and resulted in significant and sustained improvements in competence across a number of leadership and management domains, demonstrating its potential for longitudinal impact on trainees’ performance. We now aim to produce a nationally available comprehensive teaching package and offer faculty training nationally, in order to make the course accessible to more trainees and expand its educational impact.
Improving Teaching in the Clinical Environment: Training the Junior Doctors with Teaching Skills

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Background and Purpose
A significant proportion of teaching received by medical students in the clinical environment is from junior doctors. Although the GMC clearly outlines that Doctors ‘should be prepared to contribute to teaching and training doctors and students’¹ our previous research has found that some junior doctors feel ill-equipped to teach². We wanted to change and develop the Core Medical Trainee’s (CMTs) curriculum within our trust to include a tutorial on delivering teaching in the clinical environment. The aim was that equipping junior doctors with the skill and confidence in teaching would improve the quality and quantity of teaching that students receive when in the clinical environment.

Methodology
We liaised with the postgraduate office to organise incorporation of the session into the CMT’s mandatory teaching curriculum. The tutorial covered basic teaching principles and theories and demonstrated how these can be applied to the clinical environment. We used anonymous paper questionnaires to collect quantitative feedback using both 4-point Likert scales to gain the specific aspects of impression of the session and it's perceived relevance to the CMTs and also a 10-point Likert scale to assess confidence before and after the session. Qualitative feedback was collected using free text boxes.

Results
Quantitative feedback showed a 1.375 improvement in confidence in ability to teach on a 10-point Likert scale from 7.625 to 9. 5/6 (83%) of the CMTs said that they were more likely to give teaching having been to the session. 6/8 (75%) of CMTs left felt that teaching is ‘fully’ or ‘mostly’ relevant to them. Comments in the qualitative feedback showed that CMTs had found the session ‘interesting and enjoyable,’ ‘interactive’ and that we ‘directed teaching at our (CMT) level.’

Discussion and Conclusion
The postgraduate office asked if we would deliver the teaching again at the Foundation Year doctors’ teaching, which also received positive feedback. Further research would involve assessing whether students did in fact receive an increase quantity and quality of teaching in the clinical environment secondary to equipping junior doctors with the skills to teach.

¹ GMC guideline, Teaching, Training, Supporting and Assessing
Is there an App for that? - A study of junior doctor perceptions on smartphone and tablet use in clinical settings

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Background and Purpose
The advances in medicine over the past decade have highlighted a need for quick, easy and timely access to the latest evidence based guidelines and treatments. The potential role of mobile technology in this respect has been noted with studies assessing the junior doctor’s use of smartphones, personal digital assistants (PDAs) and tablets. In spite of this however the underlying pedagogical basis of such technology use is largely unknown. Though conceptual frameworks have been proposed, the impact of potential factors such as environment, culture and junior doctor attitudes remains largely unexplored. This study aims to further our understanding of junior doctor perceptions and attitudes toward mobile technology use in the clinical environment, thus contributing to the existing literature.

Methodology
Ethical approval was granted from Bristol University. Junior doctors from F1-CT2 level working at Gloucester Royal Hospital were invited to participate via information sheets presented at teaching sessions. Attitudes and perceptions toward the concept of smartphone or tablet use in outpatient and inpatient areas were explored through focus groups and semi-structured interviews. The data was analysed using thematic analysis methods, which identified saturation point.

Results
Initial analysis suggests junior doctors place greater emphasis on using mobile technology for clinical work purposes rather than for access to electronic textbooks or journals. Interestingly much of their proposed clinical uses are currently not available, such as access to patient records and laboratory test results. A limiting factor toward using these devices included negative perceptions from senior staff and patients. Some felt concern about perceived rudeness and disrespect toward patients. Many saw these devices as detrimental towards doctor-patient communication, with time constraints limiting opportunities to use the technology for patient education purposes. Full data collection and analysis will be complete by July 2015.

Discussion and Conclusions
The potential role of mobile technology towards supporting clinical practice is understandable but also uncertain. Prior to exploring the options for clinical use, the concerns of junior doctors towards mobile technology as suggested in this study need to be addressed. The impact on doctor-patient relationships is also a matter for future research.

References
3 Davies et al 2012. Mobile Medical Education-how mobile information resources contribute to learning for undergraduate clinical students-a mixed methods study. BMC Med Educ. 12:1
Junior doctor perception of documentation practice in the South West and its effect on training

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Background & Aim
Since the introduction of the European Working Time Directive (EWTD) and Donaldson reforms, there have been increasing fears about the effect of current practice on training.¹⁻³ The need for both electronic and paper documentation has compounded the problem. While documentation is an essential aspect of communication within patient care, the British Medical Association 4th Cohort Study report found that junior doctors spent more time on administrative tasks than training.⁴ We hence aimed to establish junior doctors’ perception of documentation practice across the South West and its impact on their own learning and practice.

Methods
We carried out purposive sampling of junior doctors presently working throughout the NHS trust across one foundation deanery. Each doctor completed a questionnaire, which investigated the proportion of time spent on different tasks. Specifically, documentation, the amount of duplication required in their jobs, its clinical relevance and the impact on their training was explored.

Results
To date, 86 responses are available with further results pending. Junior doctors feel that they duplicate up to 100% of their work (mean 33.8%; SD+/-24.3) on up to 6 different admission documents (mean 2.4). 24.4% reported spending over half of their on-call hours completing paperwork. This rose to 54.7% for normal working days. 84.9% and 80.7% respectively reported spending under an hour per day on their own learning. 84.9% missed learning opportunities due to administrative jobs and almost half reported this occurring at least weekly. 90.7% also reported incidence of failed or inaccurate documentation due to repetition fatigues. Almost all felt that no efforts had been made to improve the situation and some reported increasing paperwork requirements. The majority felt that computerized systems would allow for a reduced administrative workload by integrating currently used systems.

Conclusions
Junior doctors perceive repetition of documentation as a dominating factor in their working life, negatively influencing their learning and patient care. While national campaigns, such as the NHS Confederation ‘Information Overload’⁵ report and Royal College of Nursing’s 2015-2018 strategic plan⁶, call for change; local guidance and action is required to reduce unnecessary bureaucracy.

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Examining the educational impact of surgical simulation

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Background and Purpose
As modern surgical training evolves, adaptations must be made to ensure trainees remain highly skilled for excellent patient care. One way of meeting trainee needs is with virtual reality, or simulation training.\(^1\)\(^2\) There is increasing evidence recognising the successful transfer of skills obtained through simulation to operative room practice\(^3\)-\(^5\). Despite simulation being recognised as an evidence-based educational tool in surgery, there is little work investigating how simulation training benefits a surgical trainee’s career development. This project aims to examine the impact of simulation on surgical training; specifically, does undertaking a simulated skills based course affect a trainee’s experience, development and portfolio once back in the workplace?

Methodology
Core and intermediate level laparoscopic simulation training courses in the UK have been identified for inclusion over a one year period. The primary researcher will observe the courses and assess each for equivalency. All participants will be asked to complete a pre-course questionnaire. Data collected will include demographics, previous training and experience, perceived confidence levels and skill self-assessment for specific laparoscopic tasks. The same questionnaire will be issued three months post-course to assess for differences in perceived task proficiency and confidence levels. Face to face interviews will be conducted three months after the course. These will focus on attitudes towards simulation and the perceived opportunities available to the trainee in theatre before and after the identified course. Participants’ electronic logbooks and work-based assessments will be collected over a three month period, before and after the course to triangulate the aforementioned methods.

Results
This study is presently in the data collection phase and does not have any presentable data yet. It is expected that by July, questionnaire and telephone interview data from 4 core and 4 intermediate courses will be available as well as the primary analysis of these results.

Discussions and Conclusions
This study will provide original data regarding the relevance and impact of simulation on the surgical trainee. By collecting data from trainees with a broad range of laparoscopic experience and from a variety of training regions, it is predicted that this study will have national training implications. This study will also provide novel information on the equivalency of laparoscopic skills based courses offered by the various surgical colleges.

References
Medical Leadership for Postgraduate Medical Trainees

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Aims
1. To explore the current state of training in medical leadership in postgraduate medical education and begin to address gaps identified
2. To increase awareness amongst trainees about the value of medical leadership

Background
The notion of medical leadership in the NHS has increasingly become an important one, especially following the Francis, Berwick and Keogh reviews.1,2.

As trainees in O&G, we have identified that gaps exist in postgraduate medical education in the subject of medical leadership. This is a great disservice, especially as junior doctors have much to contribute, but usually fail to do so due to lack of understanding and skills to do so.

In view of this, we have decided to design and trial a teaching programme in leadership and management for trainees to address this gap. As a start to this, we have designed a teaching programme in leadership for trainees, in order to address this gap and piloted this amongst London and East of England O&G trainees.

Methods
We designed a half-day teaching programme about medical leadership, based on training we have received on the National Medical Director’s Clinical Fellow Scheme in Medical Leadership and Management and the Postgraduate Certificate in Medical Leadership, Lancaster University.

This programme contained talks and workshops about the value of medical leadership to trainees, quality improvement methodology, portfolio development and a personal development session.

Results
• Approximately 70% of trainees never had formal teaching in medical leadership
• 95% of attendees found this session useful
• 100% of attendees reported that medical leadership was relevant to them

Discussion
This has highlighted that there are shortcomings in the training in medical leadership in postgraduate medical education. The programme was very well received and this has highlighted the interest of postgraduate medical trainees in this agenda.

We will be running this in the East of England and have received interest in Wales, East Midlands, North West and London surgical trainees. We hope that this programme will be disseminated across all LETBs amongst all trainees towards improving teaching in medical leadership.

References
Post Take ward Rounds: Preparing to Lead

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Good clinical supervision is associated with improved educational and patient outcomes 1-3. The small amount published on the transition from registrar to consultant is clear that trainees feel prepared clinically but not for many non-technical aspects including supervision. We train doctors to be very good registrars but do we train them to be good consultants? Leading a post-take ward round (PTWR) involves many of these non-technical skills which trainees feel underprepared for, and therefore provides us with a good opportunity for further training. No specific training in leading a ward round exists.

A simulated medical ward round is new concept, and simulation training for senior trainees is not as widespread as for their junior colleagues. This simulation is multi-disciplinary, and also develops all members’ awareness of each other’s roles and feedback/appraisal skills.

Method
We developed a simulation day where 4 trainees conduct a 4 patient simulated medical PTWR each, using professional actors as patients and a true team (SP R, SHO, F1, nurse and pharmacist). The day concentrates on non-technical skills.

We developed an appraisal tool based on the NOTECHS4 tool to be used by all team members and facilitators. We conducted 2 pilot and 3 simulation days and we constantly reassessed and redeveloped the tool. The trainee receives ‘patient’ feedback during the simulation day.

Results
Results have shown that our tool has face and content validity. The feedback on training has been overwhelmingly positive. The feedback from the ‘true team’ has also shown educational benefits for those taking part as well as for the trainees.

Conclusion and Discussion
The appraisal tool works well in a simulated setting. The tool needs further development and then a feasibility study for real life application so that it can become embedded in trainees’ personal and professional development as they approach their consultant post, leading to quality in training but also high quality patient care.

Further exploration of post take ward round leadership using the simulation and new and experienced consultants, alongside an interview study of trainees, consultants and patients is underway. The results will feed into this and future training but also into our understanding of PTWR to improve training for all involved, patient safety and experience. We hope that the simulation and tool can be extrapolated to other specialities. Some aspects of the simulation have already been used for training of students and are being developed for pharmacist training.

References:

Acknowledgements: Thank you to HEE for funding
Motivations and potential benefits of contributing to medical textbooks

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Introduction
For generations, textbooks have had a crucial role in the learning process at medical school. Textbooks are generally considered as an accurate and comprehensive source of information that are essential to grasping both the depth and breadth of medicine. However contributing to a medical textbook is a significant undertaking, particularly for those with full time clinical commitments. Little is known about what motivates students and doctors to contribute to medical textbooks. Face-to-face teaching has been shown to contribute to professional development of tutors, like improving clinical knowledge.1-2 Similar benefits may be gained in teaching through textbooks.

Methods
An electronic questionnaire was sent to 71 contributors to five medical textbooks. The questions looked at the specific contribution to textbooks, motivating factors behind getting involved in textbooks, and aspects of professional development that may have arisen through involvement in the textbook writing process. A combination of multiple choice, free text, and 1-5 Likert scale questions were used.

Results
39/71 people completed the survey. 15% were consultants, 44% were junior doctors, and 41% were medical students. The mean estimated amount of time spent working on medical textbooks was 235 hours, with three editors contributing over 1000 hours each. 85% felt that their medical school did not help them prepare for the process of writing a book chapter.

The strongest motivating factors for participation were enjoyment of teaching (92% agreed), helping students learn (90% agreed), and improving teaching skills (80% agreed). Other motivators included helping with job applications, improving medical knowledge, improving clinical skills, improving writing style, and working with friends. The majority of contributors felt that their aims were achieved. The main demotivating factor was a large time commitment.

When asked to rate their ability before and after the project across seven domains, an overall improvement reported in: writing with a consistent style and language, ability to explain complex ideas to students, organising ideas into textbook format, team-working, editing other people's work, clinical knowledge, and understanding of copyright/plagiarism regulations.

Conclusions
This study is the first of its kind, and suggests a broad range of motives for contributing to medical textbooks. Altruistic incentives are strong motivators, but career progression is also important. This study also suggests a wide range of benefits to contributors which may translate to better overall clinical and teaching performance.

References
Aesthetic medicine: The need for post-graduate education

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Introduction
The demand for non-invasive aesthetic procedures, such as botulinum toxin and dermal fillers for facial rejuvenation, has increased exponentially within the UK. The current market is valued at £3.6 billion in 2015 with an estimated 700,000+ surgical and non-surgical cosmetic procedures occurring in 2011 (1). Following the Poly Implant Prothese (PIP) scandal of 2009 Sir Bruce Keogh headed a government initiative looking into current practice and regulation (2). The report was particularly concerned by the extreme lack of regulation for non-surgical cosmetic interventions. Health Education England (HEE) swiftly responded with a formal review of the qualifications required for cosmetic procedures and are currently drawing up recommendations on accreditation of qualifications and a national curriculum for non-surgical aesthetic procedures in order to improve the quality of care delivered to patients (3).

The foundation of safe clinical practice is education and training, and there is concern that an already highly vulnerable patient group is further exposed through a highly unregulated industry, which lacks any formal post-graduate education requirements. We set out to assess how many formal post-graduate courses in aesthetic medicine/ non-surgical cosmetic interventions are available to UK health care professionals.

Methods
The UKPASS (4) website and Google were searched to find all UK Universities providing formal postgraduate qualifications in aesthetic medicine.

Results
Only 3 UK universities offer post-graduate qualifications in aesthetic medicine: The University of Central Lancashire, The University of Manchester and Queen Mary University of London (QMUL). There are five UK universities offering post-graduate qualifications in aesthetic dentistry: The University of Manchester, University College London, Kings College London, BPP University, and The University of Central Lancashire. There are two universities offering post-graduate qualifications in aesthetic surgery: QMUL and Anglia Ruskin University. Courses range from Post-graduate Certificates (n= 3) to post-graduate Diplomas (n = 4) to Masters degrees (n= 9).

Conclusions
The PIP scandal has focused the attention of government bodies, health regulators and post-graduate educators on the non-surgical cosmetic industry. This previously entirely unregulated industry is now being brought in line with the rest of UK healthcare, with tighter regulation and the development of a new curriculum. This study shows that there is presently a clear dearth of formal post-graduate education in aesthetic medicine in the UK, which may leave many health care-professionals practicing non-surgical cosmetic interventions without formal post-graduate education.

4. www.ukpass.co.uk
Point of care multidisciplinary trauma simulation at a district general hospital

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Background
Major trauma care in England is delivered through Trauma Networks (TNs) with designated Major Trauma Centres (MTCs) leading to a significant reduction in the number of seriously injured patients presenting to district general hospitals\textsuperscript{1}. This has raised concerns about staff training and retention of clinical/trauma skills. The Great Western Hospital is a designated Trauma Unit for two TNs and aims to provide high quality care to seriously injured patients prior to transfer to definitive care. A systematic review of simulation training showed realism as a key feature in learning\textsuperscript{2} and point of care simulation has been shown to significantly improve teamwork, completion rates and speed of clinical tasks\textsuperscript{3}. Rapid CT scanning in seriously injured patients is associated with better survival rates\textsuperscript{4}.

Aims
1. Develop and retain clinical knowledge and skills of our trauma teams
2. Embed human factors training in daily practice
3. Improve the quality of patient care and experience with a focus on areas which were previously identified by serious incident analysis, critical incident reporting and trauma morbidity and mortality meetings.

Methods
A series of monthly multidisciplinary, real time, point-of-care simulation sessions using high fidelity simulator and moulage has been implemented. Simulation sessions were designed with specific learning outcomes and in line with the objectives of Technology Enhanced Learning. Debriefing at the end of the sessions encouraged reflective practice and shared learning amongst the participants. At the end of the session, the faculty members assessed the team’s non-technical skills utilising the Team Emergency Assessment Measure (TEAM) tool and a score was assigned to each simulation session.

Results & Conclusion
Measures of effectiveness of our simulation initiative in trauma management include
1. The trends of the TEAM scores will serve as a measure of human factors training
2. Timely CT scanning – before and after our training intervention
3. Feedback from participating teams with prose and on a 10 point Likert scales
   a. Mean score of 9.07 in Agreement “This improves trauma team working”
   b. With regards to confidence in managing trauma scenarios after the simulation mean increase in was 2.3 with a final mean confidence score across grades and specialties of 7.6

Data collection is on-going, and tests of significance will follow.

Feedback obtained until date has reflected point of care simulation is an effective method to keep trauma skills and knowledge up-to-date

Supporting junior doctors return to safe clinical practice

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Introduction
Incidents of sickness and mental health problems are prevalent in junior doctors especially in the early years of training. The proportion of doctors experiencing psychological distress has remained about 28%, compared with 18% in the general working population. They worry about possible stigma of work absence and low self-esteem.

Aims
- Provide maximum support to trainees who have had long term sickness absence from work
- To facilitate safe and successful return to clinical practice

Method
A multidimensional approach has been piloted with the hospital Occupational Health physician and medical education team. Once passed medically fit for work, a case conference including Occupational Health physician, trainee, medical education manager and HR adviser develops an individual structured phased return plan.

The phased return commences with part time work through the Hospital “Bank” (temporary working agency). This moves to part time attendance in a clinical setting as an observer in unpaid capacity. Once this has been successfully completed, the trainee returns to paid clinical work 37.5 hours per week working as F1 shadowing on a suitable ward. Finally the trainee returns to full clinical duties in a part time supernumerary capacity. This programme is underpinned by regular Educational Supervision meetings, coaching by medical education manager and monthly Occupational Health reviews.

Results
Presently 3 foundation trainees have undertaken this phased return in the last 6 months and have successfully returned to clinical work. The “Bank” work has varied between basic administration to support for the Hospital flu campaign. This approach has allowed them to face the challenges of returning to work in a completely supported environment. It has enabled them to adjust to the discipline of work before undertaking clinical duties. They report feeling valued within their temporary roles and this has boosted their self-esteem.

Conclusion
It is challenging to return to work following a long absence. The most recent memories of the working environment can be stressful and unpleasant due to the impact of health conditions. This combined multidimensional approach from occupational medicine, backed by educational support has provided maximum assistance to trainees whilst also ensuring safe clinical practice.

References
Iversen A, Rushforth B, Forrest K. How to handle stress and look after your mental health BMJ 2009;338:b1368
An educational approach to quality improvement and identifying learning techniques around handover amongst junior doctors.

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Introduction
Effective handover between healthcare professionals is a key component of patient care and safeguard for patient safety (1). The importance of handover has taken greater significance since many healthcare professionals work across clinical areas and have irregular shift patterns (2). Against this backdrop, junior doctors have poor handover skills and communicate information in a disorganised manner (3)(4). Hallmarks of effective communication are rarely taught to trainees in a systematic way and there is an assumption that they will learn through clinical exposure (5). This work is a part of a larger ongoing quality improvement programme around improving junior doctor handover skills, and this study specifically focused on identifying key learning needs for junior doctors in the area of handover.

Methods
Handover lists were collected over a 2 week period at the start and end of a four month junior doctors’ placement on a general medical ward based in a UK teaching hospital. A data collection tool was developed from guidelines for a standardised handover (6) to quantify quality of handover information. Key parameters included – patient demographics, working differentials or diagnosis, key investigations, monitoring requirements, rational for immediate or short term management and ceiling of care. Outcome measures were quantity of the 18 possible completed parameters per patient. Content analysed for any spelling mistakes, incoherent sentences and abbreviations provided supporting qualitative evidence.

Results
There was no change in the amount of vital handover information provided by the junior doctors during four month placement (median: start =9/18, end =9/18). Furthermore, content relating to previous management was rarely included in the handover sheets, being completed less than 10% of the time. The information often included incoherent sentences, undecipherable abbreviations and vague outstanding tasks, with phrases such as ‘chase bloods’ being used.

Conclusion
Imparting inadequate or incorrect information can be detrimental towards patient safety (7). This study confirms that junior doctors struggle to provide effective handover and do not show improvements by just ‘doing the job’ on a clinical placement. This study highlights the need for interventions that can educate junior clinicians to adopt a systematic approach to handover, so that vital patient information is not omitted. The subsequent component of the quality improvement programme focuses on investigating the effects of series of educational interventions on junior doctor handover.

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Prescribing assessments for junior doctors: working towards safer prescribing

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Background and Purpose
Prescribing drugs is one of the most common forms of therapeutic intervention made by doctors. It is an error prone process which can potentially cause harm to patients and error rates are highest amongst junior doctors (1, 2). Assessing this complex skill is important as current teaching methods utilised in undergraduate medical education do not appear to adequately prepare graduates to prescribe safely (3). Assessment of junior doctors at individual NHS Hospital Trusts might build on the national undergraduate Prescribing Safety Assessment and drive appropriate learning.

Methodology
A web based questionnaire was designed using the Bristol Online Surveys software to determine if Foundation doctors were required to undertake prescribing assessments at NHS Hospitals in the Kent, Surrey and Sussex region. A link to the questionnaire was emailed to the Prescribing Lead and Foundation doctors at each NHS Trust and was available for completion from April to July 2014. Descriptive statistical analysis was performed.

Results
Prescribing Leads from 67% of Hospital NHS Trusts responded (10 out of 15 NHS Trusts). 9 NHS Trusts (90%) ran some form of prescribing assessment for the Foundation Year 1 (F1) and Foundation Year 2 (F2) doctors they employed. All of these NHS Trusts (100%) assessed the prescribing abilities of the F1s, but just 3 (33%) assessed F2s. Only 3 NHS Trusts (33%) assessed the prescribing of non-Foundation Programme grade doctors employed. 6 NHS Trusts (67%) restricted the prescribing of doctors who were below the required standard in the assessment. 5 NHS Trusts (56%) assessed prescribing skills within one week of the F1 and F2 induction.

Discussion and Conclusions
Assessments afford a degree of reassurance to patients and employers that doctors possess skills to prescribe safely. Patient safety and clinical governance issues are paramount in the light of recent damaging reports of poor standards (4).

It is encouraging to note that a significant number of NHS Trusts assess prescribing competence early in the Foundation training period, as those requiring additional support can be identified. However it is concerning that NHS Trusts do not place more of an emphasis on assessing prescribing amongst the F2 doctors, despite them being responsible for the highest prescribing error rates (2). NHS Trusts should extend the prescribing assessments to non-Foundation doctor grades in the interest of patient safety.

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Practice Based Teaching & Learning
How are CbDs being utilised in practice and what are medical trainees’ and assessors’ perceptions of the value of feedback following these assessments?

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Aims
Workplace Based Assessments (WPBAs) are formative assessments which have been incorporated into postgraduate medical training as a useful tool for providing feedback to trainee doctors on their day to day performance. Case based Discussion (CbD) can assess a trainee’s clinical reasoning and how they may have approached ethical or professional aspects of the patient’s care. This study explores the perceptions of medical trainees and their assessors based at a London teaching hospital regarding the value and impact of feedback following CbD and investigates how these assessments are carried out in practice.

Methods
Questionnaires were completed by both medical trainees (ranging from foundation year doctors to specialty registrars) and their assessors. Assessors were also invited from the questionnaire to take part in semi-structured interviews. Quantitative data was obtained from the questionnaires and these findings supported by qualitative data collated from closed ended interview questions.

Results
In total 55 trainees and 15 assessors were surveyed giving a response rate of 62% and 43% respectively. Semi structured interviews were conducted with 4 medical consultant assessors. The majority of CbD assessments take 10-15mins to complete and these encounters are very rarely pre-planned. Generally there is a positive perception towards CbD assessments by both trainees and assessors, with recognition that these assessments provide a vital opportunity for an interaction with feedback between trainee and assessor. Most trainees respond positively to the feedback they receive by doing self-directed learning but would like more specific and tailored feedback. The main barriers to providing effective feedback was time constraints, emphasis on service provision rather than teaching and training and disengagement by either trainee or assessor.

Discussion and Conclusions
Very little in the literature exists on feedback following CbD and its educational impact. This study found that the educational importance of CBDs is widely appreciated by trainees but a more planned approach with mutually agreed learning points and improved use of e-portfolio by assessors could increase their educational value further still. By improved organisation of these encounters and completing verbal and written feedback on e-portfolio in a timely fashion by assessor can lead to a positive learning experience for the trainee.

Exploring why healthcare professionals do or don’t change their practice after education and training

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When working with healthcare professionals, educators and behavioural scientists often have an identical aim: to change healthcare professionals’ routine clinical practice. Despite this identical aim, educators and behavioural scientists rarely collaborate. This lack of collaboration means that much education continues without knowledge or use of behavioural science. This is unfortunate as much is known about how capability, opportunity and motivation all influence the likelihood of healthcare professionals practicing in a desired manner (Michie et al., 2011). Alongside this, behavioural scientists struggle to get funding and high numbers of participants in studies of professional behaviour change. By working together, there are clear, mutual benefits, not least of all is educators making explicit their implicit aim of professional practice change.

We have developed a bank of evaluation items, based on behaviour change theory, that can be tailored to specific behavioural outcomes (practice change) in healthcare professionals. These items include those that assess current behaviour, behavioural intention and multiple constructs that have been shown, in previous studies, to be associated with behaviour.

We are collaborating with educators (for example Greater Manchester Critical Care Skills Institute and Advanced Life Support Group) tailoring our evaluation items to their education and training programmes. We use the items to evaluate their courses and the educators use this information to quality improve their education. We pool data from multiple courses to generate crucial information about what behavioural determinants are influenced by education and training and how these are associated with healthcare professional behaviour.

We will present the behaviour change theories that underpin our evaluation items. We will use examples of specific education and training programmes to show how these items can be tailored. We will make suggestions for behaviour change techniques that could be added to education and training to improve the likelihood of practice change following education. We will make suggestions about how educators and behavioural scientists can form partnerships for mutual benefit and ultimately for improved patient outcomes.
Educational games: Why, what, how?

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Background and Purpose
An educational game has been described as 'an instructional method requiring the learner to participate in a competitive activity with preset rules.'[1] Through game playing, active learning and higher thinking is promoted via analysis, synthesis and evaluation.[2] Use of educational games is supported by the four principles of Knowles’ theory of adult learning: that adults are autonomous and self-directed learners, that past experiences inform learning, adults are goal-orientated and learning is problem-centred.[3]

As clinical teaching fellows, we have come to value the impact of a successful game on a teaching session, much to the interest of our educational colleagues. We have created several medical games to teach and educate on a wide range of subjects. The aim of this presentation is to discuss these along with practical advice on how to develop an educational game.

Method
We will refer to games we have designed and will link this to the appropriate educational theory with relevant literature review. These games include:
1) Benign or Malignant? - A breast lump voting game in the style of University Challenge.
2) Medical Taboo- the aim is to describe the clinical detail on the card.
3)'Guess that sign' - the objective is to correctly guess the clinical signs.
4) The Courtroom-a role play to learn about key areas of professionalism.
5)'Happy Hospitals'- a card game to learn about the wider hospital workforce.
6) PR Pictionary-a game to develop skills in describing and documenting findings correctly.

Results
Reflections, thoughts and feedback will be presented.

Discussion and Conclusion
Educational games are increasingly adopted and have many potential advantages. Their competitive nature tends to motivate participants in a way that is not always possible through more traditional methods and also helps to improve and develop communication skills.[4]. Though the impact of educational games on long-term learning is not known, their flexibility and interactive nature presents a refreshing way to stimulate students especially in those subjects that are difficult to teach. With a few simple steps, we propose that making an educational game can be a simple and exciting process, and certainly one that is received well by students.

References
Variety is the Spice of ED Life – The Breadth of Curriculum Coverage during Undergraduate Shifts in the Emergency Department

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Background and Purpose
A recognised challenge in undergraduate medical education is ensuring that graduates feel prepared for working as foundation doctors (1). The Emergency Department (ED) is a rich and well recognised resource in which medical students may gain valuable experience (2) and considered by many as essential preparation for working as a doctor (3). However, research has also highlighted the challenges of teaching and learning in this very busy, demanding and emotionally charged acute care setting (4). The aim of this study was to capture the educational experiences of undergraduate medical students during a ‘shift’ in the ED and whether the type of experience, busyness and level of supervising staff impacted on its perceived worth.

Methodology
In their final ‘Hospital Based Practice’ rotation, stage 5 students (N=40) were asked to complete a data-sheet with their supervisor at the end of each shift (2 per student). The data-sheet covered what was seen, discussed and practised during the shift. The students were also asked to comment on who they worked with (job role), the climate within the ED at the time and the students’ self-reported stress levels, enjoyment and educational benefit. The students’ perceptions of busyness were also explored and compared to the PAS booking system and departmental ‘temperature checks’ completed every 4 hours by the nurse in charge.

Results
The results presented will include the breadth of topics covered by students in the ED as well as the associations between departmental busyness, student stress levels and enjoyment.

Discussion and Conclusions
The findings from this study could guide how best to prepare students to make the most of placements as well as recommended preparation for staff involved and challenged by teaching vs service provision.

References
Professionalism
Value of the Newer Work-Place Based Assessments in Predicting Doctors in Difficulty.

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Background
Supervised Learning Events (SLEs) replaced traditional Foundation Work-Place Based Assessments (WPBA) in 2012.¹ A key element of SLEs was to incorporate trainee reflection and feedback to drive learning and identify training issues early. Few studies have looked at the value of the newer WPBA in predicting doctors in difficulty (DiD). Therefore this study evaluated this further.

Methodology
A retrospective observational study of the North-West Foundation School trainees (2012-2013 cohort) Electronic-Portfolios (n=1086) was conducted. All DiD (n=71) were included. Controls were randomly selected from the same cohort (2:1 basis) (n=142). Free text from each WPBA was assessed qualitatively and coded blindly using the General Medical Council’s Good Practice Guideline domains.²

Results
The prevalence rate of DiD was 6.5%. Binary logistic regression using Receiver Operator Curve (ROC) analysis showed that Team Assessment of Behaviour (TAB) was the only SLE strongly predictive of DiD (ROC Area Under the Curve (AUC) 0.74). The Educational Supervisor Report (ESR) was strongly predictive of DiD status (AUC 0.90). Association analysis using Fishers test showed significant associations of TAB and ESR predicted DiD status and actual overall DiD status and also the health and performance subcategories (P<0.0001). The Mini-Clinical Evaluation exercise was weakly predictive of overall DiD status (AUC 0.61) and associated with the performance category (P=0.0003). None of the other newer WPBA showed any significant associations.

The qualitative data analysis indicated that the newer WPBA were potentially useful in predicting DiD but not used to their full potential with lack of constructive, particularly negative feedback. The quality of completion of the WPBA was often poor and there appeared to be potential under-reporting of concerns.

Conclusions and Recommendations
• The TAB is the only SLE useful in predicting DiD.
• The ESR is strongly predictive of DiD and plays a pivotal role in evaluating DiD.
• The newer WPBA are not being used to their full potential and the content and quality of feedback needs to be improved.

Recommendations made from this study include greater use of TAB with structured feedback; focused training of trainers/trainees to enhance engagement and improve the quality of WPBA and ESR completion and feedback. These will then help improve identification and management of DiD.

References
A safe place to work and learn? Trainee perceptions of bullying behaviours in clinical learning environments in Ireland.

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Background and Purpose:
Workplace-based postgraduate training can expose trainees to adverse and unintended learning experiences, including bullying. Besides impacting the individual trainee, cultural replication means that this misuse of power can corrode the development of medical professionalism. “Your Training Counts”, the Irish Medical Council’s National Trainee Experience Survey, sought to detail trainees’ experience of bullying in post-graduate learning environments.

Methodology:
Invitations to participate in a cross-sectional, closed-ended, online survey were issued to all 3000 doctors registered as trainees with the Medical Council in April 2014 (attracting a 54.5% response rate). Questions replicated from the General Medical Council’s National Training Survey measured trainees’ perceptions of bullying behaviours. Responses were analysed to examine relationships between trainees’ perceptions of bullying and other items in the survey, including: trainee and environmental characteristics; self-reported ratings of health, well-being, work engagement, and career intentions; and, overall views of the clinical learning environment (as measured by D-RECT; which scores clinical learning environments between 50-250, with higher scores denoting more supportive environments).

Results:
34% of trainees reported being bullied in their post, and 15% reported this as recurrent. Interns were significantly more likely to experience bullying than doctors at any other stage of training (e.g. 46% of interns were bullied, compared to 31% of Higher Specialist Trainees). Trainees in larger hospitals were significantly more likely to experience bullying than trainees in other learning environments (e.g. 38% of trainees in larger hospitals experienced bullying compared to 15% of trainees in GP practices).

Trainees who experienced bullying were significantly more likely, than those that did not, to report poorer health, lower quality of life, lower levels of work engagement, and poorer overall experiences of their clinical learning environment. Trainees who were never bullied gave their learning environments a mean D-RECT score of 180, compared to a mean score of 145 from trainees who were bullied frequently. Bullying was associated with career intentions; 12% of trainees who were frequently bullied intended to leave medical practice in Ireland, compared to 4% of trainees who were never bullied).

Conclusions: Bullying and undermining behaviours are endemic in the clinical learning environment in Ireland. More effective management and governance of the learning environment at clinical sites is required to address the consequent negative outcomes for individual trainees and the cultural replication which erodes medical professionalism.

References
Building educational governance structures into undergraduate clinical medicine

H Taylor
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Background
At its core, governance is the strive for accountability, standardisation and monitoring to engender quality improvement. Education and training forms one of the pillars of clinical governance but there is growing recognition that education must be subject to similar quality assurance mechanisms in order to uphold its key principles. Within medical education there is a need to ensure longitudinal quality by implementing contemporaneous and progressive improvement policies that are reflexive enough to respond to external changes. To this end, the GMC has published guidance on the structure, contempt and quality assurance of undergraduate clinical placements.

Methods
A variety of methods were used to investigate the perception of quality with regard to the delivery of the undergraduate curriculum in the local clinical setting, and to identify the challenges faced by both students and educators. Qualitative end of placement feedback forms asked students to comment on a number of aspects of the organised placement. Following a multisite medical education publicity exercise, clinical staff were asked to anonymously provide feedback on their experience of undergraduate education within the hospital workplace. Curriculum mapping provided a mechanism to accordingly restructure the placement and communicate renewed educational goals. With the aim of standardisation, peer observation of teaching was put in place for clinical teaching fellows within the department, with feedback rooted in educational theory. Regular review meetings were instigated at all levels to ensure that further challenges were being identified and addressed, ensuring further professionalization and transparency of the governance strategy.

Broadening the effect
Accountability, transparency and continued development can help to foster confidence in the governance strategies and mechanisms employed. To this end, the remit has been broadened to involve junior medical educators by designing a teaching skills workshop focussed entirely on the teaching needs of those new to the field of medical education. A clinical teaching fellow forum has also been developed, to engender ideas sharing and professional development, with the dual aim of highlighting the academic potential of an interest in medical education.

Take home messages
Educational governance can become a natural part of undergraduate medical education within the context of the clinical placement. Strategies can be developed to improve standards and regular review undertaken to ensure that challenges can be identified and quality maintained. Iterative changes can aim to provide well governance clinical education that meets the vision set out by the GMC in Tomorrows Doctors.

References
Improving Transition from Medical Student to Doctor

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Background and Purpose
The transition from medical student to doctor is recognised to be a difficult and stressful period. Work-shadowing placements have helped to resolve some of these issues but recommendations have been made for even more experiential learning to be offered\(^1,2,3\). Lumley\(^4\) described an innovative experiential learning experience for final year medical students, which through the use of simulation, introduces them to challenges faced with being ‘on-call.’ This has been piloted within Barts Health NHS Trust, receiving positive feedback from undergraduate students. Our initiative was to improve the induction process for all newly qualified doctors joining Barts Health by allowing them to participate in a simulated on call hour in the hospital where they will be based.

Methodology
This was an action research project. Methods included questionnaire survey and focus groups aimed at eliciting what junior doctors and 5\(^{th}\) year medical students perceived as the main difficulties in transition from medical student to doctor. The themes not perceived by the medical students but by the junior doctors as problems were used to develop the learning objects of the simulated on call hour. Through the debriefing of the on call hour, trainees were exposed to concepts of patient safety, trust policies and complaints as well as encouraging reflection of their methods of organisation, prioritisation and clinical decision making. More practical aspects, such as how to use a pager and logistics of the hospital, were also deliberated. As part of the appraisal to this initiative we asked the trainees to complete an evaluation form after the simulation and one month after starting work as a doctor.

Results
Seventy-one trainees completed the initial evaluation, 64% rated the educational value of the simulation (on a scale of 1 to 6 with 6 being maximal education value) a 6 and the rest either a 4 or 5. All felt that the exercise helped to orientate them to their workplace, understand their job, responsibilities and performance, as well as knowledge of trust policies. Thirty-one trainees completed the follow-up survey one month later; the average rating (using the same scale) was still 5 for the educational value of the simulation having now completed an actual on call. They also rated the exercise as an average of 5 on its usefulness, again with a scale from 1 to 6 with 6 being the most useful.

Discussion and Conclusions
This induction process allowed insight into the difficulties experienced by junior doctors in their transition to doctor not perceived by undergraduate medical students. Through simulation training and debriefing of these issues, such as prioritizing, handover, time management, as well as technical and logistical aspects of patient care, these issues could be experienced before being exposed to within the workplace. By opening the eyes of trainees to such issues it is hoped that they are better prepared for their new level of responsibility.

References
“They show you how to be.” The impact of self-selected role models on medical student professional identity dissonance

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Background and Purpose
Over the past decade there has been an explosion of interest in the place of role models in medical education. Role models are thought to be key in development of professionalism, in medical identity development and in career choice and thus vitally important in terms of work force planning. Little work had been done into the ‘how’ of role modelling; this work uses social identity theory for an in-depth exploration of individuals’ experiences of role models.

Methodology
My qualitative research study aims to explore the impact of role models on student professional identity development. I used 1-1 semi-structured interviews to collect my data; six final year students were interviewed and the data analysed using thematic analysis. I used social identity theory; where identity is constructed through finding fit with in-groups and rejecting behaviour of out-groups. This lens was chosen as I am looking from an individual psychological perspective.

Results
All students interviewed described marked examples of identity conflict and talked about the impact that their self-selected role models has in reducing this dissonance by providing identity fit. The internal conflicts that the students described were around professionalism issues such as altruism, integrity, patient-centredness, academic excellence and loneliness as opposed to team working.

These conflicts emerged where the students were unsure of how they were going to fit into their perceived doctor identity in the future, or where there was conflict between their personal values and the professional values around them. This subsequently has a big impact on career choice, as they were all attracted to their primary role model’s speciality.

Discussion and Conclusions
It seems that role models act as a bridge in terms of identity fit, in that they show the students how ‘someone like them could be successful’. The identity conflicts described also highlight that students may benefit from more pedagogic space in the curriculum for reflection around professional identity development as all described examples of identity dissonance which they had struggled with for some time.

Developing a sense of professionalism in widening access students

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

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

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

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

Aiding the transition of overseas medical graduates to UK practice: A realist synthesis

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Background
The UK’s National Health Service (NHS) currently relies on overseas qualified staff to ensure effective healthcare delivery. However, following two reports released in 20111,2, concern grew around the regulation and professional practice of those qualified outside of the UK. Research suggests that overseas medical graduates (OMGs) are likely to face difficulties with communication, culture, practical issues, team working and hierarchical structures3. A multitude of recommendations have been made concerning support for OMGs; however, there is no clear indication as to the nature and extent of support required to aid in the transition of OMGs. There is also a lack of robust evidence demonstrating how effective any of the suggested interventions are in aiding transition. Currently, only a handful of NHS trusts are implementing their own strategies/induction programmes to address the issues highlighted, despite the GMC having responded themselves to concerns4 and stressing the impact on patient care.

Objectives
To understand how interventions, set up to support OMGs, support them in making a successful transition to the UK workplace. More specifically, looking at what mechanisms trigger successful outcomes and under what contexts.

Method
Due to the challenges that OMG’s are expected to face, a deeper understanding of the complexity of interventions used in their transition process is needed; hence a realist synthesis method was used to systematically review the literature. The databases searched included: Embase, PsycInfo, Medline and ERIC. Other searches were conducted throughout the review in order to inform and test the framework further. Case studies were also included.

Findings
A realist synthesis found that many health organisations (both UK and overseas) fail to implement any form of intervention, and those that do, are limited and varied. A framework is suggested that enables us to better understand how OMG’s should be supported in their transition and how to address factors that may hinder the complex process. Both psychological and educational mechanisms are likely to lead to successful adjustment. Psychological mechanisms include preparedness, confidence, social capital, cultural capital, engagement, motivation, insight, acceptance and realistic expectations. Educational mechanisms include knowledge and awareness. Contextual factors are necessary to ensure intervention success, such as establishing ongoing support.

Discussion/Conclusions
The implementation of both experiential training opportunities (induction and simulation) and a support programme (buddying) is suggested. The findings of this synthesis were fed into a Programme for Overseas Doctors (POD) at the University Hospital of North Tees, which is now undergoing a realist evaluation.

References
NHS Values training for Foundation Doctors, a regional response to the Francis Report

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Background
The Francis report(1) reported on shocking lapses of care at Mid Staffordshire NHS Foundation Trust. They concluded that an organisational culture had developed which allowed poor care to go unchallenged. A Health Education England document(2) explains that organisational values are represented by the workforce, and even individuals with the goal of delivering high quality compassionate care may be at risk of changing practice if placed within teams with suboptimal values. The Francis report itself states that “the common values of the services must be owned and lived by all members of the service”.

Methodology
The national Foundation curriculum covers clinical competencies, as well as attitudes, and states that trainee doctors should display integrity, compassion and altruism(3). As a response to the Francis Report, Health Education North West developed NHS values training for Foundation Doctors to promote:

1. An understanding of the structure of the NHS and related organisations
2. Review of the NHS Constitution and NHS values
3. Discussion of real life cases of local NHS complaints
4. Discussion of concepts such as caring, professionalism, and leadership, and the tensions between these factors and the financial constraints of NHS organisations.

Sessions were mapped to curriculum competencies and involved didactic teaching, small group work and whole group feedback sessions. More than 500 trainees have received the training to date.

Results
Predominantly positive quantitative feedback was collected about session style, pace, clarity and listening. Free text responses demonstrated that trainees valued the contextualisation of NHS values allowing them to ground them in the real world. They also felt that practical cases helped them to identify how they would deal with similar situations in the future including raising concerns to seniors. Many trainees had very limited understanding of the concept of NHS values prior to the session, and felt that their senior medical and managerial colleagues would also benefit from the training.

Impact
Trainees were encouraged to reflect on the training using a bespoke e-portfolio form. Analysis showed that doctors were aware of having been indirectly, but not explicitly, exposed to NHS values in the past. However, the training helped them to consciously apply the values to their practice and reflect on their own, and others’ experiences. Reflections suggested that the sessions impacted on the trainees’ intentions, feelings, ability to empathise, thoughts and behaviour. A number of doctors commented that they would more readily address “untoward incidents” and “inappropriate” behaviour.

3. Academy of Medical Royal Colleges. The UK Foundation Programme Curriculum. 2012.
Development of the Cambridge Personal Styles Questionnaire to support the assessment of non-academic qualities in selection and professional training

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Background and Purpose
The Cambridge Personal Styles Questionnaire (CPSQ) was developed to radically improve the assessment of non-academic qualities at undergraduate level. It is an online personality questionnaire which produces a validated framework of personality traits or ‘personal styles’ that can support NHS values-based recruitment and training. After four years of test construction, which has produced an assessment of the highest psychometric standards, it is now being piloted by healthcare faculties. This presentation will outline the development of the questionnaire, progress of on-going validation research and practical applications.

Method
A questionnaire based on the Five-Factor Model of human personality was designed after consideration of the medical education literature on behavioural factors that enhance or derail personal effectiveness. Interview research was also conducted with academic and admissions staff. A key part of test development work focused on designing an advanced response format to reduce the ability to ‘fake good’ a desirable profile and to minimise the potential impact of coaching. Versions of the questionnaire were trialled over four years with over 4,000 students studying in the UK. Model testing (factor analysis), test reliability and construct validation research (CPSQ’s relationship to established tests) was conducted as part of trialling.

Results
Results that will be presented demonstrate that the final questionnaire assesses five personal styles: Thinking, Task, Coping, Personal and Social from 13 style dimensions or scales. Its advanced response format increased score variance and reduced respondents’ ability to score highly on all styles. CPSQ conforms to high standards of reliability (test-retest \( r = .84 \) -.92) and construct validation confirms its relationship to the Five-Factor Model of personality as well as aspects of emotional intelligence.

Discussion and conclusion
CPSQ results are mapped against an entry level competency framework to create values relevant and user-friendly behavioural reporting. CPSQ is currently undergoing piloting with candidates and students. Early reports suggest that it reflects candidates’ personality and behaviour at interview. On-going criterion-related validation research is being conducted to build evidence on the relationship between personal styles and on-course outcomes. At the moment, it can be used to complement other forms of behavioural assessment such as multiple mini interviews or OSCEs. In conclusion, CPSQ is an online personality questionnaire which offers insight into personal styles of behaving which underpin NHS values and behaviours.
Preparing for the BioMedical Admissions Test (BMAT): an exploratory study

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Background and Purpose
The BioMedical Admissions Test (BMAT) is designed to measure aptitude for demanding science-based study and its results are used by a number of UK and international institutions to select students to medicine, biomedical sciences and veterinary science, alongside criteria such as examination results and interviews. It is important that BMAT preparation should have positive impact on candidates' school studies and not impose a financial barrier on accessing the test. This study aimed to investigate how students prepare for BMAT and whether differences exist by gender or school background.

Methodology
A questionnaire investigating BMAT preparation, including self-study and external sources of help was distributed to all 1st year undergraduates at BMAT institutions and 535 responses received (41% return rate; 56% female, 6% over age 21). UK state school students comprised almost 55% of the sample, with 35% from independent schools.

Results
Over 60% reported feeling quite or very well prepared for BMAT. A higher proportion of males gave this rating but no school type difference was observed. The amount of preparation provided by the school varied by school type, but not the amount or types of self-study completed. The majority of respondents used the BMAT website, specimen papers, or official preparation book. While a proportion attended commercial general preparation courses for medical entry, very few paid for specific BMAT preparation. Candidates who attended a commercial course reported doing significantly more self-study on average than those who did not. There was a positive correlation between students' ratings of preparedness for BMAT and time spent in self-study, school preparation time, and the number of different aspects of BMAT preparation they received on commercial courses and from school. Linear regression showed that only self-study time and the number of aspects of BMAT preparation received from school significantly predicted respondents' ratings of preparedness, suggesting that the correlation between commercial preparation and preparedness ratings is explained by its association with self-study time.

Discussion and Conclusions
Students' choice of how to prepare for BMAT varies, perhaps on the basis of other characteristics related to test performance for which we cannot control. Thus, causal relationships should not be inferred from this correlational study. These findings suggest that school help and commercial courses did not replace self-study for respondents. Commercial coaching gains, while difficult to estimate in a correlational design, were not apparent. This survey showed that there are simple, low-cost, ways to prepare for BMAT that support candidates' sense of test-readiness.
Evaluating Work Experience Opportunities in General Practice: a qualitative study

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Background
Widening participation for students from disadvantaged backgrounds is important but often difficult to achieve(1). Getting work experience is more difficult if students do not have medically qualified relatives or contacts to help organize and identify placements(2). In 2007 the Severn Faculty of the Royal College of General Practitioners (RCGP) started a scheme to encourage General Practices to host work experience students. The scheme provided schools with a list of GP practices willing to host sixth form students interested in medical work experience.

Aim
The project aimed to evaluate work experience opportunities and barriers within primary care and develop recommendations to improve access to work experience.

Design
Qualitative interviews analysed using a thematic approach

Setting
General Practices, Secondary schools and Sixth form colleges across South West England, Severn region.

Method
Semi structured interviews of the 3 target groups; GPs, Career Advisors and work experience students.

Results
In total 8 interviews were done (3 GPs, 3 Career Advisors, 2 students). Three broad themes emerged as barriers to getting placements: -

1. Lack of information about placements - Students and career advisors report not being aware of specific GP schemes for work experience. There is not an easily searchable online database of work experience opportunities or placements. It is difficult to find placements without a contact in the practice. Some practices only host students via a central hospital run scheme “to be fair and transparent’. GP reception staff are unaware of who organises placements.

2. Perceived Confidentiality issues - Students report being rejected from practices where the student is registered as a patient or may know the patients. A few GPs have been reluctant to host students at all as there is a perception they should not be having students in consultations, despite GMC guidance saying students can be there(3).

3. Younger Age as a barrier to placements - This causes a problem with widening access, as students cannot take part in work experience schemes with minimum age limit of 17.

Conclusion
The primary barrier to work experience placements for general practice is the lack of an easy to find, fair and transparent method of identifying practices. Implementing an open access searchable database of practices and advertising this to schools could improve access to work experience within primary care. The GMC has recently created a database of approved trainers and TD is working with them to include this searchable functionality.

References
How do medical school applicants respond to the requirement for 'work experience'? An exploration of 'going abroad'.

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Background and Purpose
Arranging work experience prior to medical school can for many potential applicants prove extremely difficult, with access to clinical settings often considered the ideal type. Potential applicants struggle to interpret the official guidance from medical schools1, making the application process intensely unsettling. Anecdotal evidence suggests that some UK-based candidates have been responding to these perceived requirements by paying to undertake commercially-mediated international work experience (i-WEX)2,3. A recent Medical Schools Council announcement highlights that overseas work experience prior to studying medicine is problematic4. However, there is no literature that would tell us anything about why it is being undertaken, by whom or about the potential consequences for participants and hosts. This project addresses this gap and offers insights into applicants’ mind-sets and the commercial environment that appears to provide a potential solution to their dilemma. It draws on parallels with existing debates around the benefits and drawbacks of volunteer tourism pertaining to medical electives and gap year volunteer projects.

Methodology
This is an exploratory interview-based study with UK undergraduate medical students (n=15). Following completion of the individual interviews, each one will be transcribed, before a thematic analysis is performed.

Results
To date some seven interviews have been conducted already and we expect the final analysis and writing up to conclude in May 2015.

Discussion and Conclusions
Preliminary analysis suggests that the seemingly conflicting guidance regarding work experience requirements has left applicants susceptible to panic when observing the apparent opportunities enjoyed by peers encountered at school and on online forums. As previously suggested in the literature, networks (into the healthcare professions) are invaluable for organising work experience, though many applicants do not have such contacts. Apparently, this leads some applicants to undertake i-WEX, which promises exotic and exciting experiences to elaborate on in personal statements and interviews.

1- Timm A. The Hopes and Fears of new medical students: An exploration of students’ perspectives of applying to medical school. Medical Education Development Unit, University of Southampton; 2013: 7.
The relationship between performance on the UKCAT cognitive tests and medical degree programme exit outcomes: a prospective UK-wide cohort study

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Introduction
It is critical to assess the predictive validity of any medical selection method in terms of quantified measures of achievement. This is arguably particularly important for the “newer” approaches to medical selection, such as aptitude tests, which were introduced to address issues of weak reliability and validity in the “traditional” admissions processes (1). In the UK, recent developments provide the opportunity to compare exiting medical students in terms of overall examination performance during medical school (via the EPM, or Educational Performance Measure) and on a Situational Judgement Test (SJT), designed to select into the next stage of medical training. Thus, the aim of this large-scale study was to examine the predictive validity of the cognitive components of the UK Clinical Aptitude Test (UKCAT: http://www.ukcat.ac.uk/), the most widely used aptitude test in UK medical education, against these two measures.

Methods
This was a quantitative study grounded in post-positivist research philosophy. We sampled all 2013 graduating students from the 30 UKCAT consortium medical schools. Medical school pre-admissions data (including candidate demographics [e.g. age on admission, gender, ethnicity and socioeconomic class, NSSEC, academic [UCAS] score and UKCAT scores]), EPM and SJT scores were compiled. Data were analysed using SPSS 22 to examine the relationship between performance and pre-admission data, using Pearson’s or Spearman’s correlations and ANOVA, Kruskal-Wallis or Mann Whitney, as appropriate.

The dataset comprised 6294 students of whom 56% (3522) were female, 44% (2772) male; 32.4% (1941) were non-white, 67.7% (4256) white. 4733 (89.7) of the 5276 (83.6%) of students who supplied NSSEC status were from the highest category. Females outperformed males for both the EPM (p<0.0001) and SJT (p<0.0001). White students had better scores than non-white students for both the EPM (p<0.0001) and SJT (p<0.0001). Students from higher SEC backgrounds had better EPM (p<0.006) and SJT scores (p<0.001) than those from lower SEC groups. Older students and those with higher pre-admission academic attainment did better in both EPM and SJT (p<0.0001 respectively). EPM and both SJT correlated fairly well with UKCAT cognitive domains (r between 0.06-0.216, all p<0.000), particularly verbal reasoning.

Discussion and Conclusion
This is the first national study examining the relationship between performance on the UKCAT cognitive tests and that on exit from medical school. The data reveal patterns of relationships between cognitive factors and medical school performance which mostly fit neatly with the wider literature and theoretical expectations. Further research is required to scrutinise these relationships.

References
Teaching Innovation & Excellence Award 2015 - Short listed submissions
I have developed a simulated medical post take ward round (PTWR) training day, aimed at senior medical registrars to help them prepare for consultant roles, emphasising non-technical skills and leading a PTWR. I have developed a concomitant formative appraisal tool to help self-reflection, personal development and formative feedback in simulation and beyond.

Simulated ward rounds for training are rare in the literature, and tend to be directed at medical students (Ref) or within surgery to aid research (Ref). Simulation is well established to support non-technical skills or human factors but here we use longer, interactive, multiple patient ward round using actors. It is inter-professional with the inclusion of a true PTWR team of pharmacist, F1, SHO and registrar, and supports development and learning of team members as well as senior registrar participants. Full 360 degree appraisal and feedback comes from the participant, faculty, the PTWR team and ‘patients’, incorporating all PTWR stakeholders views and helping reflection.

The need was established following literature review on ward rounds; non-technical skills tools and transition from SPR to consultant; an interview study of registrars, consultants (ongoing) and patients; and an ethnographic study of PTWRs.

Sustainability lies in using the tool for supervised real life PTWRs moving to strongly encourage senior trainees as they approach their Penultimate Year Assessments and Certification of Training. Training comes at a cost but funding is secured due to overwhelmingly positive feedback, and inter-disciplinary experience. The strength of support for the training has continually increased with ideas for offshoot projects to help maintain sustainability, including using footage to train junior pharmacists, and training medical students in written documentation on ward rounds.

The tool has been validated (content, construct) and feedback overwhelmingly positive from participants, consultants and team and faculty members. It is funded by Health Education England.

Finalist 2: Katrina Butcher & Richard Bamford

ePOSSOM

In response to the Department of Health’s framework for the use of technology enhanced learning, I Kat Butcher a Surgical Specialist Trainee, drafted a proposal to work in collaboration with eCancer to develop a pilot programme based on pancreatic cancer. I started and led the pilot from late 2013. The process involves 5 pairs of senior trainees acting as mentees for their core training colleagues to develop the module content and work with the eCancer technical team to create the modules through a variety of (TEL) tools. The end product is five 20-minute peer reviewed modules on pancreatic cancer.

The 8 step process we created can be seen in the below figure 1 and I also include the links to the modules.

After a successful pilot programme, ePOSSOM has created Breast and Colorectal Cancer modules. Richard Bamford, also a surgical trainee, has come onto the ePOSSOM executive team and we have presented the project to the Joint Committee of Surgical Training (JCST), Simulation and elearning panel. We are collaborating with Intercollegiate Surgical Curriculum Programme (ISCP) (the surgical trainee eportfolio system) to link directly into the curriculum as recommended elearning resources. A reflection we feel on the quality and need for such a learning tool for trainees.

The next step will be to develop further modules on all major organ specific cancers and develop Virtual patients in partnership with the University of Bristol Medical Students eSSC programme. The aim is to validate these as JCST approved eWBAs.
Finalist 3: Dr Sohaib Nazir
Cardiology Simulation training day for nurses and doctors on acute cardiology problems

sohaib.nazir@gmail.com
Current clinical/educational role: Cardiology Registrar / Clinical Teaching Fellow

I designed a novel inter-professional Cardiology Simulation training day for nurses and doctors on acute cardiology problems not covered on any other course.

Learning Objectives:
- Develop knowledge and skills in assessment and management of acute cardiac conditions.
- Participate in and appreciate the value of interprofessional learning and team working

Format:
One day course for six doctors and six nurses delivered by faculty of two nurses and two doctors, held in the hospital simulation centre equipped with latest manikins and facilities
- Learners divided into two groups of three doctors and three nurses and rotate six clinical scenarios (figure 2)
- Skill stations with hands on practice of CPAP, echocardiography and lecture on human factors and non-technical skills.
- Each scenario involves one nurse and doctor managing a case followed by debrief on non-technical skills (communication and situational awareness), and focussed teaching on clinical guidelines
- Constructive feedback delivered by observers and facilitated by faculty.

My role:
I conceived the idea, designed the entire course structure, scenarios, simulator set up, delivery, feedback and evaluation. I lead the course and am part of the faculty in facilitating feedback. I have progressively refined the course from learner and faculty evaluation and presented it at Society in Europe Simulation Applied to Medicine international conference. Pre and post questionnaires demonstrated increased cardiac knowledge and skills, hence improved outcomes.

Sustainability:
This course is sustainable long term:
- Our expanding faculty of doctors and nurses receives incredible support from the Simulation Centre for regular courses.
- There is buy-in from nurses and doctors in an environment and attitude to learn and engage in this heavily oversubscribed course.
- Furthermore, I have secured industry sponsorship, with no influence over course content, and am applying to the Local Education and Training Board to fund the course for regional trainees.
Finalist 4: Dr Emily Graves
TeamHaem
emilygraves2@doctors.org.uk
Current clinical/educational role: Specialist registrar in Haematology

In 2012 I set up TeamHaem, a social-media based educational platform with the goal of creating an international network of health care professionals who would actively participate in education and debate about Haematology.

We use a case-based format, in which short clinical vignettes are posted on our blog (www.teamhaem.wordpress.com) and users are invited to comment on the case using twitter (#teamhaem @teamhaem). We facilitate discussion and add further pieces of clinical information throughout the following week. We direct commentary and questions at various team members, depending on their engagement and area of knowledge. At the end of a case we post a comprehensive summary of the case with links and resources. (Please see any case, but Case 28 is a good example).

We have over 1460 followers on Twitter and over 1000 hits per month on our blog. We can count haematologists, junior doctors, medical students, pharmacists, medical educationalists, charities, professional bodies, nurses and consultants from numerous specialties amongst our followers. Although visitors to our blog are largely British, North American or Australian we have had visitors from over 112 different countries.

We have also established links with other medical education teams, having written cases and participated in YouTube videos for @geekymedics and @ElderlyMedEd.

My involvement: Although the concept of an education project using social media was first suggested by Dr Tiplady I set up our blog and twitter accounts alone and ran the initial cases alone. This period required a huge amount of virtual networking and development. From mid-2013 I have shared the role (of case-writer and facilitator) with three other registrar colleagues, as it is a very time-consuming process for which we receive no time in lieu. However I continue to lead the project, developing partnerships with other social media projects and forging a national and international presence.
Teaching About Specific Subjects
Authentic Reflection: Understanding the mechanisms which promote authentic reflection in differing learning contexts

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Background and Purpose

The GMC requires doctors to “regularly reflect on your own performance, your professional values and your contribution to any teams in which you work”\(^1\). However, “despite reflection’s currency as a topic of educational importance….there is surprisingly little to guide educators in their work to understand and develop reflective ability in their learners”\(^2\). Students can have negative perceptions of reflection with some struggling to develop or truly understand this skill\(^3\), and “How to engage individuals in reflection appears to be a persistent challenge to all educators.”\(^4\). AP has observed students in a variety of teaching scenarios including experiential learning sessions to which real patients have contributed. AP’s interpretation of discussions with students after these encounters is that they have, without prompting, reflected deeply upon them. However they seem to struggle in more formal sessions where reflection is identified as a specific learning objective. This research aims to understand the mechanisms which promote the outcome of authentic reflection and to suggest change in practice to improve reflection.

Methodology

One small group of students will be observed and audiorecorded firstly during participation in a formal taught session on reflection, and secondly during an experiential learning session (situated in a local GP surgery). Students and tutors will be invited to audiorecorded post session interviews, with students asked to complete a GRAS reflective questionnaire\(^5\). Data (audio-recordings of the teaching sessions and interviews and AP’s field notes) collected will be analysed using a realist approach\(^6\) to identify context-mechanism-outcome relationships in these complex situations.

Results

The findings from data analysis, including quotes from consenting students will be presented.

Discussion and conclusion

Medical students do not always recognise when they are reflecting; this may be due to: limited understanding of reflection, teaching methods employed, participants, and environment. This study aims to understand what prompts apparently deep reflection and use this to enhance promotion of reflective practice.

References

1. GMC Good Medical Practice (2012)
A realist review of successful research cultures in Medical Education

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Background and Purpose
Research is the cornerstone of healthy societies and advancement. Despite the pressures on conducting excellent research, how to promote successful research environments is not yet clearly delineated. Although the UK Research Excellence Framework 2014 identifies features of successful environments (e.g. research strategy, people, income, collaboration), there is no research evidence to support these. Therefore, we are conducting a realist synthesis to address: what factors enable successful research environments, for whom, how, why and in what circumstances?

Methodology
Realist synthesis is a theory-driven interpretive approach, which seeks to unpack the mechanism of how complex programmes work (or why they fail) in particular contexts and settings. The review was informed by the RAMESES quality standards. The search strategy included a combination of searching: electronic databases, ‘cited by’ articles, citations, authors and grey literature. Methodological quality of papers was assessed using the CASP guidelines for qualitative and mixed methods research design and the MERSQI for quantitative research designs. Atlas.ti software was used for data extraction. At each stage, at least 10% of articles were checked by multiple researchers.

Results
The initial keyword search of seven databases 1990-2014 identified 6488 papers. Titles and abstracts were read and papers deemed not relevant to the research question were excluded, leaving 420 papers. Articles were coded for disciplinary group (medical education, medicine or education) and only those were included, leaving 269 papers (75 of which were identified as original research). Programme theory is being developed based on reviewing remaining papers assessed as medium or high quality.

Discussion and Conclusions
This realist synthesis shows the interaction between context, mechanisms and outcomes for research environments. An example of this pattern in relation to leadership is where a ‘carrot and stick’ approach can lead to disenfranchisement within the context of managerialist cultures.

References
6. Reed DA, Cook DA, Beckman TJ, Levine RB, Kern DE, Wright SM. Association Between Funding and Quality of Published Medical Education Research. JAMA. 2007;298(9):1002-1009.
Exploring Barriers to the Recognition of Elder Abuse through Medical Student Simulation Training

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Background and Purpose
Elder abuse is defined by the World Health Organisation as “a single or repeated act, or lack of appropriate action, occurring within a relationship where there is an expectation of trust, which causes harm or distress to an older person”(1). Elder abuse is prevalent(2), frequently under-reported(3) and under-represented in undergraduate medical curricula(4), despite its teaching being mandated within Tomorrow’s Doctors(5). Through examination of a simulation-based teaching session, we explore the barriers and drivers to medical students making a diagnosis of elder abuse, with the overall aim of helping develop future teaching strategies for elder abuse.

Methodology
An overview of the structure of this teaching session, delivered to 3rd year medical students at Newcastle University, has previously been published(6). In the elder abuse scenario, the simulation mannequin represented a frail, elderly lady, with advanced dementia, admitted from a nursing home by her general practitioner with bruising. Students were simply asked to assess the patient. For this work we explored the evolution of the students’ thought processes during the simulation scenario, through prompted ‘pausing’ of the scenario at pre-defined times. During ‘pauses’, students were asked to record on paper, salient information gleaned from the case, and their current working diagnoses. Post-scenario, a semi-structured debrief was led by a tutor. This debrief was audio-recorded and content analysis of the discussion was performed. The research group met serially to discuss findings, and to judge the compatibility and consistency of the findings from the data.

Results
46 students undertook the session; none declined participation. ‘Word clouds’ of students’ documented observations and diagnoses were produced chronologically to illustrate the evolution of students’ thought processes as the scenario ensued. Content analysis of the debrief session highlighted a number of barriers to elder abuse diagnosis including: lack of awareness, perceived need for certainty and the absence of ‘safe’ terminology

Discussion and Conclusions
Employing simulation to teach students about elder abuse uncovered barriers and drivers to its recognition that may not have been identified though teaching using more traditional, didactic methods. The doctors of tomorrow need to be adequately trained to detect and act on suspected elder abuse, yet students may not encounter elder abuse teaching during their training. Teaching elder abuse via simulation provides medical students with guaranteed exposure to the topic in a controlled manner. Furthermore, the session generated powerful learning for some students through reflection on their experiences.

References
Evaluating ‘Equality and Diversity’ UK NHS training; the development and validation of a psychometric evaluation tool

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Background and Purpose
‘Equality and Diversity’ training provides a means of equipping healthcare professionals with the knowledge, skills and attitudinal responses to provide effective, equitable care for diverse patient populations\(^1\). The delivery of this type of training is mandatory for all health professionals in UK NHS Trusts\(^2\)\(^-\)\(^3\). Evaluation is an integral part in determining the effectiveness of training programs\(^4\). However, ‘Equality and Diversity’ training is subject to little or no evaluation and assessment beyond subjective measures (i.e. feedback forms) and rarely includes evaluating the effects of the training on improving patient outcomes\(^1\)\(^-\)\(^3\). There is a paucity of validated evaluation tools to measure ‘Equality and Diversity’ trainings in UK NHS settings\(^5\). Despite the number of health organisations endorsing a variety of equality and diversity trainings, it is unclear whether the impact of the training is known or even being measured\(^6\). The aim of the PhD Research Project is to develop, pilot and validate a psychometric evaluation tool that can be used to measure the effectiveness of ‘Equality and Diversity’ training. The development of an evaluation tool will aid in identifying training models which deliver change, highlight improvements and are cost-efficient.

Methodology
This study adopts a participatory research approach, meaning it engages key stakeholder members (professionals, patients and academics) equitably as research partners who contribute valuable and specialised knowledge to the research process. Phase I of the project involves the development of a pilot version of a psychometric evaluation tool, based on theoretical and empirical research. Phase II is comprised of participatory workshops with different stakeholder groups to gain their perceptions and experiences of current equality and diversity issues and training programs. The pilot psychometric evaluation tool will be used as a discussion item during the participatory workshops. Phase III involves the development, piloting and validation of the evaluation tool in UK NHS settings. The findings of Phase II will form the foundation upon which the final version of the tool will be built on.

Results
Results of Phase I of the PhD Research Project will be presented as well as future directions of the study and plans for dissemination of the findings.

Discussions and Conclusions
The intention of this evaluation research is to offer systematic evidence to improve and inform training programs. The research findings will be of relevance to health policymakers and commissioners and to health professionals involved in developing, delivering and evaluating ‘Equality and Diversity’ trainings in UK NHS settings.

References
A Tracheostomy and laryngectomy simulation model: How efficient is multi-professional simulation in addressing educational and practical deficiencies in an emergency scenario.

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Introduction
Tracheostomies are common procedures in Head & Neck and Critical care practice, with over 12,000 inserted each year. Of airway-related deaths, 50% are attributed to tracheostomy complications, including obstruction or displacement [1], with emergency airway management traditionally being undertaken at the patient bedside. Despite recommendations provided by NCEPOD regarding the contingency for such patients [2], knowledge of emergency management of such patients remains substandard.

Experiential learning via patient exposure still remains crucial, but substandard performance may contribute to significant adverse incidents. Patient simulation training has been effectively implemented in a variety of specialties such as paediatrics, trauma and emergency medicine. Although little literature exists regarding implementation of simulation in stoma patients, it offers the advantage of skills variation tailored to individual needs, whilst permitting the development of clinical skills without the fear of harm to patient.

Methods
A pilot study recruited a cohort of volunteers including nurses and doctors with limited knowledge/exposure to neck stomas, to attend a half day simulation course aimed at addressing the aforementioned obstacles. The course comprised of a pre and post-course assessment, as well as a series of didactic lectures. Three scenarios consisting of commonly encountered stoma emergencies were selected, and assessed by independent observers. Questionnaires were subsequently used to assess perceived outcomes, advantages, and perceptions of the learning process.

Results
The confidence exhibited increased significantly, as did levels of knowledge regarding neck stomas. All professionals involved reported positive experiences regarding their learning outcomes and simulation experience.

Conclusion
A global deficit in knowledge across all disciplines in managing neck stoma emergencies exists in clinical practice, yet exposure to this emergency clinical event is sporadic, as are opportunities for teaching during these events. The introduction of patient simulation into stoma educational sessions not only enhances confidence, but also knowledge, and teaching competencies. The use of an inter-professional educational platform, allows identification of human factors, which ultimately leads to improved patient outcomes. Although the data supporting the routine use of simulation in such patients remains unequivocal, further advocacy could lead to the development of a standardised curriculum and outcome criteria in line with nationally published recommendations [2].

References:
Widening Participation into Healthcare through Simulation

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Background and Purpose
It is recognised that candidates applying for careers in healthcare should come from diverse backgrounds. Currently however, there is under-representation of students from certain ethnic, social and economic circumstances within this setting. Work therefore is still needed to encourage the aspirations of these students and raise awareness of the opportunities available to them. The ultimate goal of recruitment onto healthcare undergraduate courses is to enrol students purely on their own ‘merit, ability and motivation and not because of their social background or the privilege, extent and effectiveness of their social networks.’ With this in mind, we aim to target a novel widening participation initiative at year 9 students in the local area, who, perhaps have not considered potential career options but, crucially have not yet selected their GCSE subject choices, which could potentially limit their eligibility for certain healthcare courses in the future.

Methodology
We are currently developing a simulation scenario following a patient on their journey from the site of a traumatic incident in the community to hospital. The patient is picked up and assessed by paramedics, before being transferred to the emergency department, theatre and then finally to the ward. Along the way a variety of professionals are encountered, with the aim of exposing the students to the array of professional groups involved in patient care. A group of year 9 students has been recruited from a local school to attend this event. Following the scenario, the professionals involved will form a panel and discuss their careers and answer any questions. On completion of the session, the students will fill out a ‘before and after’ questionnaire, with the aim of eliciting their knowledge of healthcare professions and their interest in perusing a related career prior and following the event.

Results
In the short term, we intend to present the findings of the questionnaires, as well as qualitative feedback. In the long term we aim to collect data from the participating schools on the number of successful applications submitted by students to healthcare courses, before and after the simulation, to gauge the success of this event.

Conclusion
Community simulation is a novel way of widening participation into healthcare professions. It can reach students who have not previously considered a career in healthcare, and at a point in their education when they are making important decisions about their subject choices.

References:
The use of junior doctor-lead teaching initiative to improve haematology knowledge and confidence amongst senior medical students.

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Background
Peer-led teaching is well known to be of a great advantage both to students and tutors. Such initiatives are common with both senior medical students teaching junior peers as well as doctors at different level of their postgraduate career providing teaching schemes for medical students.

It has been previously identified that students at the Leicester Medical School feel under confident about their knowledge of hameatology and would welcome additional teaching on the subject.

Aim
We aimed to run a meritorically sound haematology traching scheme for final and penultimate year medical students in order to improve their knowledge and confidence in the subject of haematology.

Method
As a group of core trainees with previous substantial teaching experience gained during an academic FY2 year as Clinical Educators, we have set up a three day teaching scheme for final and penultimate year medical students with an aim to improve their knowledge and confidence. Senior academic staff at the medical school approved the scheme. The teaching was open and advertised to all medical students but was primarily aimed at 4th and 5th years. The teaching materials, approach and structure of the sessions were discussed with a haematology consultant.

Students were asked to anonymously complete an MSCQ on the topics taught as well as a questionnaire about their perceived confidence in the subject before and after the sessions. Results were compared to assess the effect of attendance on students’ knowledge and confidence.

Results/Conclusions
The results are currently being collected and analysed and will be available by the time of the conference

References
1. Cate O, Durning S “Peer teaching in medical education: twelve reasons to move from theory to practice” Medical Teacher 2007, Vol29, NO 6, 591-599
Teaching, Learning & Assessment on Clinical Rotations
Impact of FAIR clinical teaching principles in action

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Background
FAIRness (feedback, activity, individuality, relevance) approach was used to develop a model of progressive, weekly, small group tutorials based on students’ own work. This model has been previously shown to aid students’ adaptation to their first clinical placement. The aim of this study was to examine the impact of FAIRness on students’ learning of clinical medicine.

Methods
Participants were third year and final year medical students attached to one UK vascular firm over a four-year period. Students were asked to write a reflective essay on how FAIRness approach differs from previous clinical placement, and its advantages and disadvantages. Essays were thematically analysed and globally rated (positive, negative or neutral) by at least two independent researchers.

Results
108 students submitted reflective essays over the study period. Over 90% of essays reported positive experiences of FAIRness model. According to students, The model provided multifaceted feedback; active participation; longitudinal improvement; relevance to stage of learning and future goals; structured teaching; professional development; safe learning environment; consultant involvement in teaching.

Students perceived disadvantages including preparation for tutorials being time intensive; a lack of teaching on medical sciences and direct observation of performance; not enough sessions (once weekly); some issues with peer and public feedback, insufficient relevance to upcoming exams and large group sizes.

Students’ perceptions of “standard” clinical teaching paints a picture of haphazard, unplanned, passive sessions, with low involvement of senior teachers, poor opportunities for feedback on individual performance, and no real opportunities to have improvement noted and certified.

Conclusion
If this study is a true picture of the current state of undergraduate clinical teaching, then this represents both a major condemnation of our negligent stewardship of undergraduate clinical medical education, and a huge challenge for the years ahead. Progressive teaching programmes based on the FAIRness approach could be used as a model to improve current undergraduate clinical teaching.
Transformative learning – new methodologies for researching transitions in the medical course

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In the medical course there are three major transitions: from school to university, pre-clinical to clinical medicine and from medical student to foundation doctor. Arguably, the most significant transition, in terms of change in attitudes and methods of learning, is the middle one. Although the physical changes from school to university are very great, there is still an emphasis on book learning and assessment by coursework and examination. Students are often not well prepared for the next transition, which involves learning in the workplace, often with an informal timetable and poorly defined curriculum with variable standards of assessment.

Transformative learning, introduced by Jack Mezirow¹, is a concept applied to major changes in attitudes towards and strategies of learning. He described ten features that are common to experiences of transformation.

- A disorientating dilemma
- A self examination with feelings of guilt and shame
- A critical assessment of epistemic, sociocultural or psychic assumptions
- Recognition that one’s discontent and the process of transformation are shared and that others have negotiated a similar change
- Exploration of options for new roles, relationships and actions
- Planning a course of action
- Acquisition of knowledge and skills for implementing one’s plan
- Provisional trying of new roles
- Building of competence and self-confidence in new roles and relationships
- A reintegration into one’s life on the basis of conditions dictated by one’s perspective

We were interested in developing a methodology to research transformation during the medical course. As these features are complex, we felt it was unlikely that standard questionnaires could address them satisfactorily. We tried semi-structured interviews based on these ten features, followed by standard content analysis, although we are still open to other possible methods.

Clearly it would be beneficial to assist students by promoting transformative learning through the teaching methods used on the course. We felt it was unlikely that the current variable provision of teaching in the early clinical years would promote transformative learning, but there may be an opportunity to assess more innovative methods. We have currently applied this methodology to the FAIRness model²³⁴. There is potential to perform comparative studies when the methodology is refined and accepted.

1. Mezirow J. Transformative learning: theory to practice. New Directions For Adult and Continuing Education 1997;74: 5-12
Exploring how feedback-seeking using feedback postcards impacts on self-regulation and self-efficacy

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Background
Providing effective, relevant feedback enhances teaching and learning\(^1\), and is one of the components required by deliberate practice\(^2\), the focussed effort to develop immediate performance improvement. However, feedback may be perceived to have more value if it is specifically sought. Feedback-seeking can be defined as making a conscious effort to proactively obtain feedback on one’s behaviour to attain a desired goal\(^2\). In the context of business and management it can also improve motivation, engagement, learning and performance. This has not been specifically studied in medical education. Self-regulation describes the process of monitoring, self-assessing and reacting to the outcome of the student’s performance for the purpose of self-improvement. Feedback-seeking is one of the most important factors that can enhance or impede self-regulation of learning. Individuals with a high level of self-regulation tend to have high levels of self-efficacy\(^4\). Self-efficacy is one of the key mechanisms of personal agency and describes the ability to assess competence to perform and complete specific tasks in a given domain. We explore the association between feedback-seeking behaviour and deliberate practice, self-regulation and self-efficacy in undergraduate students in medical education.

Methodology
We have developed a system for students to proactively seek and record feedback in the clinical setting in years 3 and 5 of a 5-year medical degree using Feedback Postcards with Supervised Learning Events (SLEs). Using a constructivist mixed methods study using grounded theory\(^5\) and action research approaches, we have gathered data from staff and student questionnaires, focus groups and interviews. Using motivation and barriers to seeking feedback as starting points we have investigated associations between feedback-seeking, self-regulation, self-efficacy and deliberate practice in a clinical education setting. Data were qualitatively analysed using NVIVO.

Results
Initial results suggest that students found seeking feedback strengthened their ability to self-regulate by helping them modify how to approach and complete tasks and establish appropriate and achievable goals. Their sense of self-efficacy improved after obtaining performance evaluation from an external observer who was willing to deliver feedback. Enjoyment of the opportunity to demonstrate their ability and receive positive feedback gave them the confidence to seek new opportunities to practice tasks and so improve their performance.

Discussion and Conclusions
Students and staff found that the Feedback Postcards encouraged balanced feedback discussions about their performance. This external input guided their ability to set learning goals, improving their levels of self-regulation and self-efficacy, which in turn motivated them to seek further opportunities to practice and improve their skills.

References
Student teaching Programme (STeP) an integrated system to structure and reward junior doctors’ teaching

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Background and Purpose
Near-peer teaching is beneficial for both the students and junior doctors involved\(^1,2\). The GMC recognises teaching as an essential component to medical practice\(^3\) and demonstrating development as a teacher is now a mandatory requirement of foundation training. However, doctors can be poorly supported in developing as a teacher\(^4\) and teaching sessions delivered may not correlate with the students’ curriculum. A structured teaching programme was developed to fulfilled junior doctors’ requirements to be exposed to teaching opportunities whilst ensuring teaching was suitable for medical students.

Methodology
This is an action research project. The Student Teaching Programme (STeP) was introduced at North Bristol Academy to co-ordinate junior doctor teaching. This comprised of a training evening, teaching reward card, student mentorship scheme and a revision tutorial programme. Junior doctors were informed of the medical students’ curriculum and teaching opportunities within the hospital at their induction and this was supplemented by a teaching handbook. To ensure uniformity and central organisation of teaching, an email account was created and on-line sign up system was used. The quality of the teaching was ensured by reviewing doctors’ teaching materials, observing individual teaching sessions and providing written feedback with e-portfolio sign-off.

Feedback was collected from both students and junior doctors about their experience of the scheme using a questionnaire survey. The questionnaire focused on what areas of the programme were used, the experience of the scheme and areas for development. Information gained from this feedback has shaped a further teaching programme.

Results
Analysis of the student results revealed common themes including having a preference for middle-grade led teaching and an appreciation of focused in-depth topics rather than broad basic information. The doctor feedback focused on the benefit of having a co-ordinated and complementary teaching scheme and the opportunity for targeted feedback. However there were problems with student continuity, practical application of the reward card and difficulty establishing their own teaching programme.

We will present the full analysis of our results and discuss the lessons learned from this project in an attempt to improve future delivery of co-ordinated doctor-led teaching schemes.

Conclusion and Discussion
The development of a structured scheme to involve junior doctors in medical education can improve the quality and amount of teaching delivered to students, whilst supporting doctors in achieving their mandatory teaching requirements. Developing a co-ordinated approach seems particularly pressing given the e-portfolio emphasis for junior doctors to deliver teaching.

References
Background and Aims
Learning in ward rounds in medical education has been a well-established practice over the centuries. It exposes the students to both the explicit component of medicine which consists of biomedical and applied sciences as well the implicit with 'use of intuition, experience and holistic perception in making clinical judgements and in the delivery of human care'. But its value as a place of learning has been slowly changing over time. It is not only the commitments and responsibilities of senior clinicians that have changed over time but also the clinical environment including the attitudes of patients, and finances and resources of the healthcare system. Equally, the students’ expectations have not gone unchanged especially after the introduction of higher tuition fees. This study explores medical students’ perspective on the learning in ward rounds, using a survey to collect data. In the second part of the study, senior clinicians’ views will be sought along with their expectations of students’ role in increasing their learning opportunities.

Methodology
Views from two cohorts of students were collected using an online anonymous questionnaire with a view of qualitative approach. The two groups included the third year medical students of Imperial College London who completed their first clinical attachment of 10 weeks in Hillingdon Hospital and the second being fifth and final year students who were attached to Hillingdon Hospital in the same month. Compared to third year students, fifth and final years had exposure to ward rounds from many specialities from multiple teaching hospitals under Imperial College. The questionnaire consists of open and closed questions. The questions were aimed at exploring their current experience, their expectations of ward rounds and the value they have placed among other teaching and learning methods. The second part of the study will start next month.

Results
Though many students reported the ward round as enjoyable, they ranked it as the worst learning method apart from problem-based learning. The results were analysed, including the reasons for students’ positive and negative experiences and their expectations of ward rounds. The findings will be presented in detail; including discussion regarding ways to improve ward round learning.

Discussion and Conclusions
Ward round learning is variable and depends on the learning style of the students and the commitment of relevant clinical teams. Both the students and the clinicians can play a constructive role in maximising the learning gains from ward rounds.

References
SimEthics: Teaching Medical Ethics Through Simulated Patient Cases

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Background and Purpose
Everyday healthcare professionals manage ethical issues that arise from patient cases. Appropriate, experienced management of such issues makes a significant difference to patient experience and outcome. Our anonymous survey found that final year medical students have a confidence of 5.6 (10-point Likert scale) of the management of medical ethical issues. We have designed high-fidelity simulation teaching to teach about the GMC’s ethical principles and their practical application to simulated cases.

Methodology
We designed three simulation scenarios to cover three medical ethical issues that commonly present in clinical practice: (1) domestic violence and maintaining patient confidentiality, (2) capacity assessment and management of patients who wish to discharge against medical advice and (3) acting in a vulnerable patient’s best interests. For each session we delivered the three scenarios, with a debrief between each, over half a day. The sessions were delivered to thirty-three final year medical students, divided over five sessions. We collected qualitative and quantitative feedback through focus group work and an anonymous questionnaire.

Results
The final project (n= 33) showed a statistically significant improvement in confidence with managing domestic violence cases and issues around confidentiality of 2.36 (10 point Likert scale) with a statistically significant p-value of <0.0001. There was a 1.94 (10 point Likert scale) improvement in confidence of assessing capacity with a p-value of <0.0001. The improvement in confidence in sedation and acting in patient’s best interests was 2.3 (10 point Likert scale) p-value <0.0001. Students feedback that there was a ‘massive difference to learning in real time than textbook’ and it made the ethics teaching ‘much more fun and more memorable.’

Discussion and Conclusion
Teaching medical ethics through high-fidelity, experiential learning, showed a statistically significant increase in student’s knowledge and confidence in managing medical ethical issues.
Improving a Mentorship Programme for Final Year Medical Students

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Background and Purpose
Mentorship programmes are frequently used for junior doctors but until recently hadn’t been used between doctors and medical students. Our Academy felt that a mentorship programme would benefit students with both academic and pastoral support. Two years ago our Academy set-up a mentorship programme between final year medical students and junior doctors. Results were positive and have been previously reported\(^1\),\(^2\). From this we gained a broad range of multi-source responses. Some students expressed concern about ability to contact their mentor and journal correspondence suggested that results would have been more valid had there been an increased proportion of the participants who feedback and have raised concerns about the ability of junior doctors to deliver both effective teaching and pastoral care (Journal correspondence (Clinical Teacher) in press.)

Methodology
To improve on the above issues, this academic year we assigned each final year medical student to two mentors. Secondly we included mentoring feedback in the compulsory end of placement feedback questionnaire for all 35 students attending their final year clinical attachments. Finally, prior to the start of the mentorship programme this year we invited all mentors to two evening sessions to teach on teaching in the clinical environment and delivering pastoral care to students.

Results
Focus group feedback revealed that students valued having two mentors as if one disengaged they still had another who was available to them. However, there were still a few students who never met their mentor. Including the feedback in the compulsory end of placement questionnaire improved participant feedback from 46% to 93%. The evening teaching to train mentors was very much valued with positive feedback. The students’ overall experience of the mentoring programme improved from 2.92-6.0 (7-point Likert scale) in 2012/13 to 4.07 (5-point Likert scale) this year.

Discussion
We have used multi-source feedback responses following the introduction of our initial mentoring programme to make appropriate amendments to improve our programme. As a result, feedback has improved and is now excellent. We plan to continue to gain further feedback and make changes to develop and continue to improve our programme.

\(^1\) A Hawkins, Establishing a Mentorship Scheme between Final Year Students and Junior Doctors, ASME
\(^2\) A Hawkins, 2013, A Mentorship Programme for Final Year Students, The Clinical Teacher, Wiley and Sons
Item sharing problem among medical students – the problem and solutions

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Background and Purpose
Evaluating students at different time-points is not an easy task. Standards must be maintained in order to have an equal, reliable, valid and fair evaluation[1]. Multiple choice questions (MCQ) tests are commonly used and given the difficulty of creating a new set of questions for every exam, tests’ questions are often reused. This raises a serious problem of question sharing between students[2,3,4]. In this study, we aim to give evidence of an item-sharing problem among medical students and present solutions to solve it.

Methodology
5th year medical students in the Faculty of Medicine of the University of Porto, undergoing the pediatric clerkship, are submitted to an exam at the end of their clerkship. In 2012, there was a suspicion of item sharing between students of different clerkships, and scores were normalized by the circle-arc method. In 2013 and 2014, no questions were reused in the different clerkship exams and scores were equated by the mean for equivalent groups method.

Results
In 2012, the mean score increased 1.36 points (in a scale of 0-20) by clerkship rotation, with the last clerkship having a difference of 9.5 points regarding the first one (p<0.001). 50% of this variation was due to the repetition of questions. In 2013, with a new question bank, the mean score increased 0.8 points by clerkship rotation, with a difference of 5.6 points between the last and the first rotations (p<0.024). Finally, in 2014 there was no significant variation between clerkships.

Conclusion
We have proved that there is a greater probability of answering repeated questions correctly, opposing a previous study result[5]. Since the rotations’ groups are similar, we can infer that students share questions among them. Efficient approach to correct this bias evaluation is restricting the reuse of questions in different exams and normalizing the results by an equating strategy.

References
Transition from pre-clinical to clinical years – how can we help students?

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Background and Purpose
The literature suggests that many students do not feel prepared for the transition into clinical years\(^1\). Using problem based learning and providing students with early clinical exposure should reduce the stress associated with the transition\(^1\), yet anecdotally our students were still finding the transition challenging. We were keen to explore what students educated using these approaches were uncertain about and to develop activities to support students moving into the clinical years.

Method
Guided by the MRC framework for evaluating complex interventions\(^4\), we developed an evidence base on which to structure our intervention. Literature about ‘the transition’ was reviewed to identify areas that students found challenging. Eight students, who had only just entered their clinical years, were asked to rank which of these areas they had found most challenging and to discuss how the transition could have been made easier for them. Their discussions were audio-recorded and analysed to inform the development of a workshop and other curriculum interventions. Evaluation was performed using questionnaires.

Results
Students reported that they were most concerned about self-perceived deficiencies in their knowledge, how they would learn effectively in the clinical environment, and new assessment measures. Whilst they felt very comfortable communicating with patients, taking histories and performing clinical skills, they found the responsibility of inputting into patient care daunting. Students also felt uncertain about how much time they should spend in clinic and what would be expected of them, as they had heard that this varied between specialties and clinicians. Students found that early year’s tutors could not guide them on the clinical curriculum and hence relied upon more senior students for information.

Pre-clinical/clinical tutors and senior students were able to use these findings to create a workshop with supporting resources to prepare students for the transition. This included demonstrations of how early year learning experiences prepare students for the clinical environment, videos of the unfamiliar assessments and guidance about expectations and levels of variability. A student-led resource about a ‘day in the life of a clinical student’ has also been created. Evaluation data will be shared at the conference, alongside further suggestions of how the boundaries between the pre-clinical and clinical years can be softened.

Discussion and Conclusions
A card sorting task based upon educational literature was a useful approach to developing a tailored educational intervention. The multidisciplinary team enabled the development of better resources and bridged knowledge gaps between faculty members.

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\(^4\)Medical Research Council. Developing and evaluating complex interventions: new guidance. 2008; London: MRC.
‘Good Busy’ vs ‘Bad Busy’ – How to Overcome the Challenges of Teaching in a Busy Emergency Department

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Background and Purpose
Any staff member who has trained in the Emergency Department (ED) is well aware that it is a unique environment with huge variety and acuity, offering a fantastic learning environment. However, those who work in the department often have to manage the tricky balance between safe and effective service provision and dedicating time for effective and enjoyable teaching.

Previous educational research into this learning environment has concentrated on postgraduate learning or has been conducted in the US [1] and Canada [2] or focused on nursing [3]. Few studies have concentrated on undergraduates in the ED setting.

Methodology
All staff members from two busy DGH EDs were asked to contribute (N=65) by completing a questionnaire designed to capture: the key aspects of the ED as a good learning environment, the challenges of teaching there and contributions suggesting how these challenges could be overcome. The results were tabulated from the perspectives of the student, patient and the ED as a whole.

Results
Thirty-Six nurses, doctors and healthcare assistants took part. All had witnessed teaching being delivered in the ED. The findings demonstrated that many of the strengths of the ED were inextricably linked with its challenges as a teaching environment. For example, ‘Pressure’ was seen as a positive lever to push learners ‘out of their comfort zone’ but also that the ED was too high pressure for learning to occur. ‘Time’ challenges also polarised views: students could be seen to help speed up the patient journey as well as slow it down.

Discussion and Conclusions
Based on these data, which uniquely canvases opinion of ED workers experiencing teaching in this complex and pressured acute setting, a ‘Top Tips’ document has been produced summarising useful insights to assist those involved in undergraduate education and provide safer and smoother teaching experience for staff, students and patients.

Transition to Clinical Medicine: Lessons Learnt from the introduction of a new unit at the University of Bristol.

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Background and Purpose
The transition between predominantly preclinical and clinical learning in the Bristol MB ChB Programme occurs between years 2 and 3. Here, as elsewhere, students find this change stressful. We designed a four-week unit, Learning in The Hospital Environment (LiTHE), to prepare our students for self-directed adult learning and immerse them in the clinical learning environment, which ran for the first time in 2013/4. Here, we summarise feedback from two years of experience derived from focus groups with students and educators, and compare quantitative data relating to students’ anxieties and experiences of this new unit.

Methodology
This unit was derived using a 3-stage Delphi process and subsequent iterative discussion, as described at the ASME ASM in 2014. Educators’ views were sought after the end of both years to review how the unit had run, and compare issues experienced with those predicted. We surveyed students at the beginning and end of the second academic year on their readiness for clinical learning and perceived stresses associated with the change of learning environment. We ran focus groups with students before starting LiTHE and on its completion to review the unit strategy and teaching methods and make improvements.

Results
During the development of this course, we were keen to focus on learning outcomes associated with the doctor as professional, rather than scholar and scientist (the theme of the first two years), or the doctor as practitioner, which tends to be the focus of the remainder of the programme. Initial experiences suggest that behaviour modification was unnecessary. An initial student feeling of there “not being enough to do” needs to be addressed and is probably symptomatic of the teaching vs learning paradigm associated with this transition. Details relating to the quantitative survey and focus groups will be discussed.

Discussion and Conclusions
There is much in the literature relating to “clinical tasters” in medical programmes. LiTHE does more in that it marks the progression away from taught lectures, helps them and their future tutors identify areas they struggle in and aligns them with their next learning environment and colleagues. Having run this unit for two years we are in a good position to review feedback and evolve the programme accordingly.

References
“My Quality Idea”: Dragon’s Den Quality Improvement Projects designed by Second Year Medical Students

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Background
Quality improvement projects are becoming a fundamental part of being doctor in the medical profession. Little teaching currently exists in the medical school curriculum, particularly in the early years of medical school. We aim to introduce the concept of quality improvement to second year medical students who are about to embark on their clinical placements in hospital, using a “Dragon’s Den” format.

The objectives for this project are for the students to understand the idea and importance of quality improvement, to begin to take a creative approach to solving practical issues within the hospital setting and to develop skills that will enable them to be innovators of the future. We hope that the students will provide fresh eyes to the hospital setting and seek novel ways of improving the efficiency within the hospital.

Methods
A preliminary teaching session on the concept of quality improvement projects will be delivered to second year medical students. The students will then be grouped into pairs and will have three weeks to develop an idea for a potential quality improvement project whilst being on their first ever hospital placement. The students will then create a pitch for their quality improvement project and present their “Quality Idea” to a panel of “Dragons” in a “Dragon’s Den” forum at the end of the three weeks. The Dragons will consist of a panel of hospital clinicians with experience in quality improvement and patient safety. The panel will then judge which projects will be suitable for implementing in their third year.

Results
We aim to evaluate this “Dragon’s Den” method of teaching the concept of quality improvement projects using a post-teaching questionnaire and focus group. We will present the ideas the students have developed and the results of our evaluation at the annual conference.

Discussion and Conclusions
The concept of quality improvement can be introduced early in the medical school curriculum using a “Dragon’s Den” format. This can be an effective teaching method and ideas resource for improving hospital services in the National Health Service.
Technology Enhanced Learning
Cranial Nerve App: The Impact of an Interactive E-learning Resource on Students’ Learning Experience
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Background and Purpose
Over recent years, many e-learning resources have been successfully incorporated into blended undergraduate teaching programmes to enhance student education. Pedagogical research and the study of neurobiology have shown that e-learning resources can increase students’ active learning and motivation to enhance their education. The subject of cranial nerves is fundamental in all medical, dental and neuroscience undergraduate degrees. Students must develop a solid understanding of the cranial nerves and full cranial nerve examination before leaving university. Therefore, an interactive, multimedia e-learning resource was created for 2nd year medical, dental and neuroscience students to aid their revision of cranial nerves. This study aimed to assess the impact that the e-resource had on students’ learning experience and on their knowledge of cranial nerves.

Methodology
The e-resource was distributed on iPads to 87 students who were asked to study the Cranial Nerve App for 10 minutes. The cohort was split into two separate groups and assigned specific cranial nerves to study (Set A= CN V and VII; Set B= CN III and VII). The two groups were given questionnaires before and after using the resource to assess how the e-resource impacted their learning preferences and cranial nerve knowledge. One week after students had used the resource, a third questionnaire was emailed to participants to assess if information was retained. In total, 73 sets of data were compared and analysed.

Results
After using the resource, Set A students’ knowledge of cranial nerves significantly increased. Set B also showed improved knowledge of cranial nerves, yet in was not significant. There was a 30% response rate to the post-one week questionnaire and there was no significant evidence of retained knowledge. When asked about preferred learning methods for revising cranial nerves, a significant number of students favoured using ‘iPad apps’ rather than more traditional study methods, like textbooks and lectures. Overall, students’ had very positive attitudes towards the functionality, usability and interactivity of the resource with 100% of users stating they would use the resource again.

Discussion and Conclusions
Evidence demonstrates that a carefully designed interactive e-learning resource can improve students understanding of scientific topics and have a positive impact on their learning experience. However, students must be made aware that textbooks, lectures and practicals should still be used as primary modes of learning; but e-resources can be used as highly beneficial complimentary educational tools, especially for revision

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Development of a “Pre-Prescribing” e-learning tutorial for medical students

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Background and Purpose:
Senior medical students report poor confidence in their prescribing skills, with only 29% of a large comfort (2413) feeling confident(1). To ensure competence in this core skill of a doctor, the University of Bristol has introduced ‘Prescribing Tutorials’ as a core part of the final year curriculum, spread throughout a 12 week unit.

Tutors who taught this course recognised that students struggled with basic concepts which hindered learning of higher concepts in earlier tutorials. We created a “Pre-prescribing” e-learning tutorial aiming to provide a basic understanding of prescribing principles

Methods
E-learning was chosen as users could study at their own pace and time and can receive instant feedback when completing the activities. It is also a cost-effective means of teaching the underlying principles that can be built upon in the face to face teaching.
Adobe Captivate was chosen as the platform for this tutorial because of its numerous learning interactive tools and its flexibility in creating customised interactions.

Results
The tutorial was distributed to all Bristol final year medical students in September 2014. After completing the tutorial, students were asked to complete an anonymous survey asking for free-text feedback on the learning interactions used and to rate their confidence before and after completion of pre-prescribing tutorial. The response rate was 20% (66/250). 86% of the respondents felt that there was a need for this tutorial and ~ 97% said that two of the three main aims of the tutorial were ‘successfully covered’. Prescribing confidence analysed using the paired t-test showed that completion of the prescribing e-tutorial is associated with highly significant (p<0.00001) increase in confidence across all four areas. Most free-text feedback responses commented on the ease of use and how varied learning interactions helped them consolidate and apply the knowledge learnt.

Conclusion
Although, this pre-prescribing tutorial was developed on the basis of tutor opinions, once disseminated, students agreed unanimously on its need. The majority of students felt the e–tutorial helped them meet the specified learning objectives, and that the design was clear and user friendly. The introduction of this e-learning tool within the curriculum has been a positive step to introduce students to the principles of prescribing and provides them with a sound basis to progress to, and benefit from, the tutorial series.

Reference
Simulation for the masses: Combining high-fidelity mannequins and electronic voting systems

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Background
Simulation teaching incorporates experiential and adult learning theories, creating a compelling educational tool. Studies show simulation improves knowledge, technical and non-technical skills(1). Traditional simulation is faculty intensive, as active participation necessitates small groups, limiting the availability of this resource. Integrating benefits from simulation teaching to a larger audience, requires a novel approach.

Aims
To utilise TurningPoint technology to deliver simulation teaching to larger audiences, and evaluate learner experience, qualitatively analysing contextualisation and experiential learning through trial and error.

Methodology
We developed two teaching sessions, to 20 and 22, MBBS3 and MBBS5 medical students respectively, covering evidence-based management of upper gastrointestinal haemorrhage.

A faculty member assessed a Laedel-3G-mannequin (SimMan) in front of the class. At key intervals, through TurningPoint keypads, students voted independently, to choose the next action. For MBBS3, options were preselected, however MBBS5 students discussed each stage in groups, with suggestions immediately entered into TurningPoint, followed by a vote. The most popular option was carried out by faculty or a volunteer student, with appropriate consequences. Afterwards, faculty lead a scenario debrief.

Evaluation took the form of Likert scales, and written qualitative data during a facilitated discussion.

Results
MBBS3 students (n=20) agreed the teaching was useful (mean rating 8.2/10), creating a relevant context (mean rating 8.3/10). Students felt involved in the session (mean score 7.5/10), 60% commented specifically about interactivity, including TurningPoint questions “make us feel more involved” and although “No hands on with SimMan … the session was very interactive”, helping to “keep us motivated” and “learn more”. Yet, 70% commented the group was too large, and 40% commented that getting up in front of their peers was stressful.

Of the twenty-two MBBS5 students’ comments, 22% mentioned groups should be smaller. Seven appreciated the scenarios contextualisation, “bringing the issues with evidenced-based practice to light”, being able to “practice applying the guidelines” and creating “real life pressures”. Seven commented on stress being positive, relating to decision making, not personal exposure. Eight students commented on experiential learning, such as “we made wrong decisions as a group … which was useful”, and “it would be good to do again and learn from mistakes”.

Discussion
Large group simulation can successfully reproduce contextualised learning and experiential learning, through voting technology. This worked best with more senior medical students, given freedom to generate their own actions. This teaching method will be rolled out and evaluated in post-graduate medical teaching.

Reference
1) Yuan HB, Williams BA, Fang JB, YE QH. A systematic review of selected evidence on improving knowledge and skills though high-fidelity simulation. Nursing Education Today. 2012. 32(3), 294-298
Fuss free formative feedback, using TurningPoint as an assessment tool.

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Background
Students commonly report a lack of sufficient individual feedback to inform their learning. Formative assessment is critical for learning, allowing learners to chart their development, identify knowledge gaps and promotes self-direction.(1,2) With large groups of medical students, this is labour intensive and difficult to achieve. We are a district general teaching hospital, running an intensive 15-week programme for forty medical students, covering foundations of clinical practice.

Aim
To assess the potential of TurningPoint technology to deliver personalised formative classroom assessment to medical students, identifying learner needs and promoting self-directed learning.

Method
We delivered weekly TurningPoint quiz sessions based on the objectives covered in the week’s teaching, consisting of clinical cases linking 30 multiple choice exam style questions (MCQ). Learners were divided into four groups, allowing group discussion but independent voting, using a key-pad. Cumulative responses appeared on screen, identifying correct answers, followed by a discussion.

Learners received immediate feedback and were able to compare their own knowledge with their peers. After the quiz, learners received a personalised email with the correct answers, group responses and group performance, plus their personal ranking versus their peers using quartiles, and the scores making the quartile boundaries. There was no pass mark. After the quizzes, learners in the lowest quartile overall were identified and referred voluntarily to their educational supervisors, and informed of topic areas with poorest performance to guide learning.

Results
All learners evaluated the programme using Likert scales, sessions were rated an average of 9.3/10 for usefulness and relevance, 8.5/10 for influencing personal study, and 8.8/10 for interactivity. Qualitative evaluation was positive about teaching strategy, with “lots of pictures”, “interaction”, and a “sense of fun in the room”, with particular praise for “real time feedback” which “helped identify what you knew and what you needed to revise”. All forty learners passed the summative assessment, non-significantly better than the whole year (Local-mean 75.6%, Year-mean 75.0%, T-test: p=0.68). Formative quiz scores correlated significantly with summative results (Pearson-correlation n=40, R=0.4, p=0.012).

Discussion
Using TurningPoint, database formulae and a mail merge, we achieved regular interactive non-intimidating assessment and feedback, allowing rapid marking and analysis of results, with real time and comparative feedback. Set-up was resource intensive but subsequent use requires little further resource. Learners were very positive about the pilot, feeling it improved learning. Technical problems hampered one session, causing data loss. This technique is a valuable addition to learner feedback methods and is being piloted in more units.

References
Use of an i-book to complement a teaching skills course

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Background  
Undergraduate medical students at our institution are given i-pads in their penultimate year. As part of an innovation for technology-enhanced learning an i-book was designed to complement a compulsory one-week teaching skills course. Materials included: administration details (e.g. timetabling), lecture slides, key points for each day’s themes and teaching materials (e.g. case studies) for use in the classroom setting. Additional resources included links to supplementary reading (selected journal articles), exemplars (e.g. lesson plan template), poetry templates (frameworks for creative writing), an interactive quiz to establish learning styles and information about further educational development (e.g. external e-learning material).

Tools were available for students to use the ibook as a workbook, including ability to highlight, annotate notes and share learning material with each other (e.g. own notes) and faculty (e.g. reflective writing). It was anticipated that the ibook could be referred to as a handbook following course completion.

Although electronic tools have the potential to enhance teaching and learning it is not clear that this is the effect in practise. Furthermore there are concerns that use of ipads in the classroom encourages use of unrelated social media.

Study Design  
Students who had attended the course in the preceding 12 months were sent an online evaluation to collect information regarding the ibook as a learning resource, a workbook and for promoting broader reading. Responses were analysed using both quantitative and qualitative methods.

Results & Implications:  
Most students did not find the i-book a useful complement to the teaching skills course: ‘technology for the sake of technology’. The perceived main advantage of the i-book was to create a paperless system. Access to supplementary reading and e-learning resources was poor: ‘using ipads should bring a new and more effective way of studying rather than just replacing the paper format. There is no paradigm shift’. More than one third of our respondents used the ipads for accessing non-course material during teaching time: ‘majority of ipad use was for non-course materials – email, facebook, games’

Responses indicated a gap between faculty intention and the reality of students’ use and satisfaction with the ibook. This may reflect in part the failure of the faculty to highlight aspects of the ibook which could be useful. Effective use of technology-enhanced learning may not only require faculty engagement, however, but the collaboration of students to initiate a paradigm shift.
Social Media in Undergraduate Medical Education – a cross-cultural study

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Background and Purpose
Social media has integrated into the lives of most medical students and serves as an advantageous educational platform to supplement their learning. However, the paucity of research available leaves some doubts as to the plausibility of reported benefits. Our study aimed to provide greater understanding about the ways in which medical students currently use social media to support their learning. In addition, we explored attitudes towards social media and whether it could influence medical learning. The study cohort included students from Australia, Saudi Arabia, and Kuwait in order to draw comparisons with UK medical students and to elucidate whether there was any cultural variation in attitudes to using social media in undergraduate medical education.

Methodology
A 16-item online questionnaire was sent to both UK and international medical schools for distribution to their medical student cohort. Questions, developed from our literature review and pilot study, centred on personal and educational activities on social media in addition to whether respondents believed social media had a positive or limited role in medical education based on their own perspectives and experiences. Quantitative data was analysed via SPSS and all qualitative transcript underwent content analysis.

Results
Preliminary evaluation indicates that a significant majority of students support the use of social media for medical educational purposes. Circulation of educational resources, staying connected with peers, generating discussions with peer-to-peer study groups online and increased motivation were identified as the core benefits of social media use for medical learning. Concerns for online professionalism and privacy were highlighted by students but overall does not appear to outweigh the reported educational benefits gained from using social media.

Discussion and Conclusions
Support for social media use is greater in international medical schools than in the UK, which leads us to conclude that cultural factors and the nature of student-to-teacher collaborations in different countries may influence students’ attitudes towards social media integration into curricula delivery.

References
“A stroke of genius” - Student-led redesign of an online educational activity

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Background and Purpose
A series of online, discourse-based educational sessions were developed as part of the undergraduate teaching for the first year Respiratory block at the University of Dundee undergraduate medical school. Although successful pedagogically1, the student feedback was more ambivalent, and there was pressure from the alter the sessions, or cede the timetable space to a more successful intervention. Consequently, a student-centred approach2 was taken to redesigning the sessions.

Methodology
A third year student who had previously completed #flusenario undertook a complete review of the sessions, including all feedback received and learning objectives. Following this and supplementary research into social media and outbreaks3, the four sessions were completely redesigned. Where the previous format had been four one hour sessions run through Twitter, the structure was now:
Session 1 – Seminar – Introduction to flu, and the clinical impact of the disease and epidemics;
Session 2 – Small group session – introduction to social media and twitter for medical education;
Session 3 – Live twitter chat on flu epidemics;
Session 4 – Face-to-face debrief and summary

Results
117 students from Dundee participated in this year’s twitter chat (plus 45 students from a different university who participated in one session). Social network analysis (Hawksey) and content analysis (Leximancer) showed no significant difference between the 2014 and 2013. Responses from student feedback were significantly improved, with the majority of students reporting both enjoying, and learning from, the experience.

Discussion and Conclusions
A student-centred revision of this intervention created a truly blended approach, which helped students to see the real world context and wider applications. This is reflected in the positive feedback received.

References
Using Real-time Video-tagging Software (Studiocode®) to Enhance Communication Skills Training.

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Background and Purpose
Good communication is key to safe and effective patient care and many complaints are rooted in poor communication¹. Development of communication skills is, therefore, an important element of training for all healthcare professionals. Both observation of routine practice and participation in simulation exercises can be useful in communication skills training, but the connection of such work to future practice often takes place in subsequent debrief or feedback². Video-based feedback has also become popular, and is useful in reflection as it allows learners to actually review their performance. A new tool which can enhance video-based feedback is Studiocode®, a computer program that enables ‘capture, coding and analysis’ of video³. Through an easy to use interface, video can be manually tagged in real-time so that defined behaviours, skills or other aspects of interest are noted on the video timeline. This allows instant playback of these tagged segments, avoiding the need to re-watch the entire video in full. Originally developed for use in sport, few studies have been undertaken on its use in medical education, although some work has been done in the field of teacher training.

Methodology
In Nottingham, experience is being gained in using Studiocode® to enhance mental healthcare communications skills training. Learner feedback has been gathered from two small group interprofessional learning sessions⁴ and while feedback from participants was very positive, the sample was small (n=15). Further experience of using this novel tool in communication skills training will be gained and feedback from participants sought.

Results
Results from learner feedback on the use of Studiocode® in communication skills training will be presented. Feedback on what teaching staff have learnt about how best to use this technology will also be reported.

Discussion and Conclusions
So far, Studiocode® has shown great potential as a useful tool in communication skills training. It offers a time-efficient means of using video in debrief/feedback to learners, removing the need to sit through lengthy footage by allowing focussed review of learners’ performance. Additionally, learners report feeling less squeamish about watching video of themselves when it is presented as spliced-together snippets rather than an entire encounter. The experience of using this software and usefully integrating it into teaching will be discussed and feedback from learners and teachers presented. In order to show how simple and effective the use of Studiocode® can be, the software will be demonstrated in action.

References
Improving induction and handover: “Your guide to your post – Wiki-style”

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FY1 doctors rotate every 4 months to a different clinical specialty and require a local induction to work safely in their new environment. The GMC have identified induction as a key indicator of quality in training through the national training survey (NTS) [1]. Following induction, junior doctors develop a working knowledge of their post, which is often not handed-over to their successors. Poor communication around the changeover of FY1 posts is therefore detrimental to both patient safety and the experience of the junior doctor. We aimed to develop a central, online resource for induction, created by FY1s for FY1s, to improve the quality of induction and handover in FY1 posts.

Methods
We analysed the results of our local annual survey of foundation trainees along with data from the GMC NTS of the last 3 years. We subsequently recruited a team of FY1 doctors to create a series of “Wiki-style” pages, one for each FY1 post, located securely in the foundation section of our medical education directorate website. Each page has a uniform structure and combines essential induction materials with useful “top-tips”, gained by the doctors working in the post. The website was launched to foundation doctors during their second post in December 2014.

Results
Our usage data from the medical education directorate website has already demonstrated use of the pages following their launch. We will reassess the impact of this intervention with a survey, following the changeover of FY1s in April.

Progress
We plan for ongoing processes of improvement with regular consultations with the FY1 doctor(s) in each post to quality assure the pages. Several FY1 doctors have run sessions with their peers, explaining how to manage the pages and we plan for these to continue. Updates and examples of change will be emailed out to all FY1 doctors.

Discussion
Our handover pages now provide a central resource for FY1 doctors working in NHS Lothian that enables them to access useful practical information on their current and future posts. This resource has been well received and is already being utilised by our junior doctors. Despite initial concerns over governance, we have developed a system where trainees can take responsibility for keeping the pages up to date, thus generating trainee ownership of the resource and facilitating sustainability. With continued improvement we believe these pages will become central to the experience of FY1 doctors and the safety of patients on our wards.

References:
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T-log.co.uk: An innovative online resource for recording, reflecting on and rewarding commitment to medical education.

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Background & Purpose
Evidencing engagement with teaching activities is an increasingly important component of appraisals, interviews and revalidation at all levels of medical training. Following a successful trial of concept locally, we developed an innovative tool for educators to reliably record their teaching activities.

Methods
An electronic Teaching Log (T-Log.co.uk) was designed to be easy to use, accessible on a range of devices and allow users to register and log in to their own space to keep a personal record of their teaching. An area to reflect is available for each entry, with guidance provided derived from educational theory. Additionally users are able to request feedback from their learners, again with the feedback from being designed with educational theory in mind.

Results
Of the first 200 registered users within the Severn region, 15% were CTFs, 13.5% consultants, 10% CT/ST1-2’s, 28% foundation level, 2.5% GPs, 7% medical students and 15.5% SpR’s. 1335 unique entries were recorded over a 5 month period, with 55% of these recorded by CTF’s. 26% of CTF sessions were small group tutorials, 26% bedside teaching and 16% simulation sessions. Of the CTF entries, 35% of sessions were >90 minutes, 35% 60-90 minutes, 24% 30-60 minutes and 6% <30 minutes.

Conclusions
In a climate where evidence of engagement with professional activities is increasingly sought, T-log offers a platform to accurately record medical teaching events. T-log is used by medical professionals of all grades across a range of specialties within the Severn region, allowing them to record teaching, reflect and receive feedback that is session linked. The data generated by T-log can be used at an institutional level to make sense of who and what is being taught, by whom, where and how long for. In turn this can be used as a basis for service improvement and educational research.
An exploratory study concerning the possibilities of utilising mobile apps within the medical education curriculum

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Background and Purpose
Use of mobile devices and medical apps is continuously expanding\(^1\) but their integration into medical curriculum varies greatly\(^2\). Over 85% of clinicians now use smartphones, with 50% using apps in clinical practice\(^3,4\).

There is currently a range of medical apps available\(^4\) but the rapid growth of apps has increased the risk of using an unreliable app\(^5,6\). Several authors\(^4\) suggest that the NHS and medical professionals should designate and peer review reliable, evidence based and up-to-date apps. The NHS has started to approach this area\(^7\) by launching their Health App Library project to assist the public and professionals in deciding which apps could best assist them.

Similar guidelines should be developed for medical education with processes for quality assurance of apps and clear guidance\(^6,8,9\).

The purpose of this study is to investigate staff’s views on the potential role of apps in the curriculum and investigate if there are any apps that staff are currently using and recommending to students for learning and/or personal development at the Faculty of Medicine in the University of Southampton.

Methodology
This is an exploratory qualitative study to ascertain the thoughts, practices and suggestions of staff regarding mobile technology and specifically apps for teaching and learning medicine. Staff members (n=20) with responsibility for module, subject and year leadership of different areas of the curriculum were invited to participate in interviews. These were audio-recorded, transcribed and analysed using qualitative data analysis.

Results
Results from the data analysis of the interviews will be presented to provide an overview of the main themes that represent views and concerns of staff on role of apps within the curriculum and barriers to their integration into teaching.

Discussion and Conclusions
Although use of medical apps by medical students and patients is expanding\(^1,2,10,11\) uptake and use by teaching staff is currently very low.

The rapid growth of available apps, lack of time, support, resources and issues regarding suitability and quality\(^5,6\) are major barriers preventing staff from actively using or promoting apps as learning tools, in direct contrast with student views and expectations\(^10,11\).

Further research and collaborative work involving both staff and students across different medical schools is needed to share the burden of developing and auditing apps. These as well as suitable funding resources are necessary if we want to maximise the potential of mobile learning and apps within medical education.

References
Autopsy exposure for medical students: A technological solution

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Background and Purpose
The viewing of fresh autopsy specimens provides a unique opportunity for medical students to see the biology underlying common medical presentations, usually macroscopically, but also potentially histologically. It is also often the student’s first contact with a recently deceased patient. More than 90% autopsies in the UK are performed at the direction of, and with permission of the Coroner or Procurator Fiscal. We sought to create a technological solution to the logistical difficulties associated with scheduling regular autopsy attendance away from the medical school. This was devised to enhance learning by providing the opportunity for short sessions of integrated learning, rather than stand-alone attendance, perhaps particularly relevant for pathology.

A high definition video camera, with PTZ remote control and recording capabilities, has been installed at the public mortuary to provide a highly secure and encrypted video stream to the University. This provides live camera feed and the possibility to create short films of anonymised internal organ dissection. Speech is transmitted via a hands-free Bluetooth connection to Skype, operated via a wall-mounted hygienically covered iPad. This process was undertaken with the consent and approval of Her Majesty’s Coroner for Avon, and with input from the Human Tissue Act designated individual for the Coroner’s mortuary.

Methodology
Questionnaire-based data has been recorded from students to assess the views of students surrounding autopsy, and evaluate the learning experience from their perspective. This is compared to student experience gained from attending the mortuary in person.

Results
Our new system is intuitive to use and easily facilitated by a second pathologist sitting with a small group of students on University of Bristol premises. Our initial experiences have enthused students and led to requests for autopsy attendance. The Human Tissue Authority have viewed the system and we hope to be able to use the system in the future to train new HTA members. Data gathered from surveys of student experience will be presented.

Discussion and Conclusions
Within a wide footprint of student placements across the clinical years of the MB ChB programme, the University of Bristol requires innovative solutions to blended learning approaches that support students’ learning across the curriculum in a meaningful and memorable format. Challenges to create a secure and authenticated connection, within the Human Tissue Act, have been overcome and this system will be extended to the postgraduate training of cellular pathology trainees in the future.

References
Undergraduate Medical Education – Assessment
Does Video Feedback Improve CPR Performance in Medical Students?

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Background and Objectives: It has been recognised students require practice at CPR scenarios, not merely learning the theory using paper or electronic documents. It is particularly important to adequately prepare students for scenarios where they will have to manage and emergency situation, with patient safety being key (as outlined in Tomorrow’s Doctors). In addition, simulation within medicine is increasing in use. Medical students at Queen’s University of Belfast (QUB) are taught Advanced Life Support Cardiopulmonary Resuscitation (ALS-CPR) as part of the undergraduate curriculum. This study aimed to evaluate the effectiveness of video compared to verbal feedback in assessment of student ALS-CPR performance.

Methodology: Final year students participated in this study using a high-fidelity mannequin, in the Clinical Skills Centre (QUB). Cohort A received verbal feedback on their performance and cohort B received video feedback. Video analysis using ‘StudioCode’ software was distributed to students. Each group returned for a second scenario and evaluation four weeks later. An OSCE marking tool was created for performance assessment. Interobserver variability was also assessed.

Results: Students having video feedback had significantly greater improvement in scores compared to those receiving verbal feedback \([p = 0.006]\).

Individual skills, including ventilation quality and global score were significantly better with video feedback \((p = 0.002\) and \(p < 0.001\), respectively).

Student feedback on the video system was positive. There was moderate correlation between assessors for assessment of compression depth and ventilation quality (Kappa 0.477 and 0.417, respectively).

Conclusion: There is increased use of simulation in medicine but a paucity of published data comparing feedback methods in CPR training. This is one of the first studies to demonstrate the benefit of video feedback in CPR teaching. These results suggest:

1. Use of video feedback when teaching CPR is more effective than verbal feedback and enhances skill retention.
2. This method of teaching may be useful in the acquisition of other skills with the benefit of a permanent record of the competency skill level achieved.
3. This may be a useful technique in the assessment of students/doctors in difficulty, allowing documentation of progress and recording acquisition of competences in craft specialties such as surgery, gynaecology and interventional radiology.

References:
Using "common content" to compare passing standards for written finals examinations across UK medical schools

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Background and aim
UK medical schools set their own passing standards for all examinations and graduation from medical school entitles a student to practise medicine as a provisionally-registered doctor. Although the External Examiner system is designed to provide evidence that standards are comparable across schools, such evidence is entirely qualitative [1] and some quantitative evidence suggests passing standards for clinical examinations vary across schools [1-3]. This study aimed to evaluate whether the passing standard set for single best answer items used as part of schools' written finals examinations is comparable across schools.

Methods
A cross-sectional study design was used. All UK medical schools holding written finals examinations were invited to participate (N=31). Participating schools were provided with the same set of 55 core "common content" items and asked to include a target of 50 in their 2013/14 finals examination(s). Each school used their own standard setting process and ran their examination before providing relevant data to the project team. All data were anonymised prior to analysis. The psychometric performance of the items was evaluated using classical test theory. A general linear mixed model with repeated measures was undertaken using maximum likelihood estimating to compare the standards set across schools. Ethical approval was obtained from The University of Birmingham (ERN_13-0598).

Results
22 schools (71%) participated in the project, with 19 using item-level standards for the main analysis. Schools used a mean of 49 items in their examinations. Psychometric performance of the items was acceptable and a significant improvement on that in a pilot project undertaken in 2012/13. The mixed model was statistically significant, although the effect size was small, with 4.1% of the variance in standards being accounted for by schools. The individual school-level coefficients were statistically significantly higher than the median in two schools and lower in one school. For 16 schools participating in 2012/13 and 2013/14, there was no consistent relationship between standards over time, although the difference in standards between schools reduced.

Conclusions
The project has confirmed that it is possible to develop a bank of items of sufficient quality to be used in finals examinations across the majority of schools. Although some differences in standards were identified, not all schools participated, there was no national standard set for these items and no school made any progress decisions on the basis of these items alone. The project is continuing in 2014/15 with all UK schools participating.

References
Does performance in early years predict performance in OSCE’s in later years?

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Background
There is evidence from one UK medical school to show that poor performance in OSCE’s tends to be recurrent in years 3 – 5 of the undergraduate curriculum (1). It is not known if this is the case at other medical schools. If it is, it suggests that current remedial teaching is not effective and another approach might be more appropriate.

Aims
To identify which results if any from years 1 – 3 correlate with OSCE results in years 4 and 5 and to determine if these early results can be used to predict performance in OSCE’s later in the course.

Methods
Exam results from three cohorts of students who started in 2008 – 2010 were analysed by multivariate analysis to determine if there are any results in years 1 – 3 that are associated with performance in OSCE’s in years 4 and 5. There were 675 enumerable students for year 4 predictions and 454 from 2008/9 entry cohorts, for year 5 predictions. The strength of the correlation of the identified early results with later results was tested by constructing correlation scatter-graphs.

Results
The clearest predictors of later performance in OSCE’s were from OSCE results in early years (2 and 3) and accounts for over 50% of variation. Although results in written exams in early years was also associated with later OSCE performance the contribution was low compared to OSCE’s. In a prediction model, earlier years’ OSCE’s, with some contribution from a small number of written modules, are positively predictive of performance in years 4 and 5 (adjusted $R^2$ values 0.53 for year 4 and 0.55 for year 5).

Discussion and Conclusion
We have confirmed that OSCE performance in previous years is a good predictor of performance in OSCE’s in later years and applies at all levels of performance. Depending on the threshold for concern it should be possible to identify the majority of students at risk of performing poorly. Since current remedial teaching does not appear to be very effective it raises the question about a different approach.

References
Factors Affecting Award of Examiner Global Scores in OSCE’s

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Background
Global score assessment is a relatively new assessment tool. Examiners award these marks at the end of the OSCE station. Using the borderline regression method global scores are used to determine the “cut” score (pass/fail mark) for each station. Little is known about what factors are involved in decision making by examiners when awarding a global score. They are instructed to use their overall “judgement” without specific reference to the checklist scoring.

Aims
The aims of this research are to identify what attitudinal, behavioural or other factors are important to examiners when awarding global scores, as a marker of overall performance.

Methods
A prospective questionnaire was administered to all Final MB OSCE examiners in February 2014. The questionnaire asked examiners to rate the “importance” of various “non-technical” human factors, when they award a global score. These factors are based on the GMC’s document, “Tomorrow’s Doctor’s.” (1) The questionnaire was validated by the classical validation method. The quantitative data was analysed by Principle Component Analysis using SPSS to identify the active domains. Statistical significance was achieved with a P-value of less than 0.05. The qualitative data was analysed by thematic analysis to identify the emerging themes.

Results
A total of 128 questionnaires were returned with a response rate of 69%. Four domains of characteristics emerged. The characteristics that grouped together and which had the most influence on global score assessment where the student’s:
  • attitude,
  • empathy,
  • professionalism,
  • respect and dignity
  • privacy.

The next domain consisted of communication and rapport with the patient. The third was knowledge, competence and technical ability. Finally, the fourth domain consisted of appearance, confidence and slickness of performance. Of all the characteristics, appearance was the factor least likely to influence the global score mark.

Discussion and Conclusion: Examiners felt that a good candidate was a student who performed in a professional manner, with the correct attitude, who had a reasonable knowledge base and who communicated and interacted well. We suggest that these descriptors could reasonably be recommended to examiners as key pointers in assisting them in their decisions about awarding global scores.

References:
1) General Medical Council. Tomorrow’s Doctors: outcomes and standards for undergraduate medical education. 2nd Ed. London: General Medical Council; 2009
Delivering assessment through iPads: Initial reflection on feasibility.

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Medical students are asking for more detailed and personalised feedback from assessments, in particular from summative assessments. This has proved to be a difficult task due to staff time restrictions and issues surrounding the maintenance of the integrity of question banks.

The Leicester Medical School has begun trialling software that allows written assessments to be delivered securely and offline via students’ personally owned iPads. With considered backend setup, this software has the potential to generate detailed personalised feedback, which can be delivered securely to each student in a timely manner.

Method
Two formative assessments containing both single best answer (SBA) and short answer question (SAQ) style questions were created using Examsoft © servers. Prior to attending the assessment, assessment files were downloaded in an encrypted format by second year students (n=223) onto their own devices (4th generation iPad) using the SoftestM © application. Students attended an invigilated assessment session, when the test was activated for timed student completion. Questions were presented in random order to each student. On submission of the completed assessment, SBA scores were calculated automatically and SAQ questions marked on-line. Scores were fed back to students with automated personalised feedback in relation to their responses to questions. The assessments were undertaken one week apart under examination conditions, after which the students were invited to give feedback about their user experience.

Results
Both assessments were delivered successfully to all students (n=223) with minimal intervention from examination invigilators. The majority of students found the process of undertaking an exam on the iPad to be simple and intuitive and most reported that the feedback they received was timely and more personalised when compared with the current paper based assessment.

Implications
Further software solutions continue to be explored but the evidence gathered so far suggests that E-assessment delivered through an iPad is a robust practical solution that has the potential to generate more timely and more personalised feedback, when compared with current paper based systems. Research is ongoing.
Three years of oxygen prescribing by medical students taking final MBBS examinations.

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Background and purpose: Oxygen is a widely available and commonly prescribed by junior doctors. Appropriate delivery of oxygen is vital as its use in conditions such as COPD, stroke and MI is associated with significant adverse events and outcomes if not administered correctly. National audits have highlighted inadequacies in oxygen prescribing; the British Thoracic Society emergency oxygen audit showed that only 56% of patients on oxygen had a prescription and a national COPD audit found that 49% of patients had or were receiving high flow oxygen (p<0.001). This study looked at three years of oxygen prescribing to examine how changes to oxygen prescribing teaching within the final year MBBS syllabus has impacted on students ability to prescribe oxygen safely and appropriately.

Methods: For three years students had to prescribe oxygen for either a 72 year old woman with COPD (scenario 1) or a 72 year old woman without respiratory disease (scenario 2). The prescriptions were assessed against BTS standards for correct oxygen flow and device, correct target saturation range and frequency of delivery. Prescriptions were categorised as 'safe or unsafe' and 'perfect and not perfect'. After the first year of this project a number of teaching sessions and e-learning modules relating to oxygen were developed to improve the student's prescribing.

Results: The results are shown in figures 1 and 2 below.

Discussion and Conclusion: Introduction and development of e-learning modules in prescribing oxygen therapy and an increasing focus on prescribing throughout the final year has resulted in a continued improvement in oxygen prescribing with particular improvements seen in the correct saturation range, correct device, continuous frequency and those who wrote safe prescriptions. There is still the need for improvements in oxygen prescribing as the number of safe prescriptions was relatively low and many students prescribed inappropriate oxygen therapy to patients with both COPD and those without respiratory disease. We are therefore going to alter our oxygen prescribing sessions earlier in our curriculum and continue to develop our e-learning sessions for final year.

References
Undergraduate Medical Education – Teaching & Learning
Would focused teaching on the Interpretation of Black-White Inverted Chest X-Rays improve accuracy of abnormality detection?: A Pilot Study

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Background and Purpose
Accurate interpretation of chest radiographs (CXR) is essential as a junior doctor in order to make clinical decisions. Studies suggest that medical students have limited exposure to radiology during their undergraduate training (1,2) and have been found to perform poorly on interpreting simple CXR’s (3). Little data has been published regarding the effect of black-white inverted CXR teaching on the accuracy of radiographic interpretation. The aim of this pilot study was to assess whether an educational intervention for undergraduate medical students using the ‘inversion mode’ would be worthwhile to improve the accuracy of abnormality detection on CXR’s.

Methodology
We sourced 30 CXR images, showing one abnormality, namely consolidation (no=10), pneumothorax (no=8), mass lesions (no = 3) and “other” abnormalities (n=6). 3 normal CXR’s were also included. Each CXR was converted to inverted view using Adobe Photoshop. Images were collated into two powerpoint presentations, each with all 30 images in the same order but with only the inverted or normal view of an individual image within 1 presentation. Students were invited to attend two separate sessions one week apart, in order to see each image in both views. Students were given one minute for each image and were asked to record whether they felt the image was normal / abnormal, if abnormal where they felt the abnormality was, and finally to give a specific diagnosis.

Results
Of the 13 final year students who attended, 9 attended both sessions and whose results are reported. The average number of images with the correct diagnosis in session one and session two was 8.1 and 13.6, respectively. The average number of images with the correct diagnosis in ‘normal’ and ‘inversion’ views across the two sessions was 10.9 and 10.7, respectively. Each student identified the correct diagnosis on the ‘inversion’ view but not on the ‘normal’ view on 4.6 images (mean, Range: 2-8, SD: 1.9).

Discussion
Foundation doctors are expected to be proficient in interpreting CXR. However, final year medical students do not preform well on interpreting simple radiographs. This pilot study has demonstrated that students are identifying abnormalities on images in the ‘inversion’ view, that they are not identifying on the same image in ‘normal’ view, despite having no previous experience of interpreting images in this mode. This suggests we should be teaching undergraduate medical students CXR interpretation using both ‘normal’ and ‘inversion’ mode, to increase accuracy of abnormality detection.

References
Using High-Fidelity Multidisciplinary Ward Simulation Training to Prevent ‘Never Events’

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Background and Purpose
The Department of Health proposed the introduction of a ‘Never Events’ policy within the NHS from April 2009. In 2014 there was a total of 197 ‘Never Events’ Reported to the Strategic Health Authority between April and November, demonstrating that they are not an infrequent occurrence. A recent local project using a simulation-based approach to teaching final year medical students about ‘Never Events’ was found to be effective. High-fidelity simulation for both undergraduate nursing and medical student has been shown to be effective in other areas within healthcare and the primary aim of this study was to determine whether simulation used in an inter-professional context is effective and acceptable for ‘Never Event’ teaching at an undergraduate level. The secondary aim was to determine if ‘ward’ simulation is more realistic and demonstrates the impact of human factors on medical errors.

Methodology
Three high-fidelity simulation scenarios were created incorporating six ‘Never Events’, with each scenario involving two patients. The ‘Never Events’ included were ‘Transfusion of ABO-incompatible Blood Components’, ‘Misidentification of Patient’, ‘Inappropriate Administration of Methotrexate’, ‘Opiate Overdose in Opiate Naïve Patient’, ‘NG Tube Misplacement’, and ‘Maladministration of Insulin’. Each scenario also addressed the effect of human factors on medical errors. The simulation training was delivered to 30 final year medical students and 21 final year nursing students divided into 6 sessions. After the session the participants were asked to complete a questionnaire using a 10-point Likert scale. Free text boxes were also provided to gain qualitative data, which allowed for exploratory thematic analysis.

Results
Initial results from 6 sessions delivered to 30 medical students and 21 nursing students has shown an average improvement in awareness of ‘Never Events’ of 3.4 (p value <0.005), with an average awareness at the end of the session 9.9/10. The average confidence of students to be able to take steps to avoid ‘Never Events’ following this teaching was 8.8/10. Students found the multi-patient simulation added to realism, average score 9.1/10.

Discussion
The impact of human factors on medical errors, in particular, ‘Never Events’ is well known. The initial data collection from this project has shown that high-fidelity simulation for undergraduate medical and nursing students together is an effective method of teaching and demonstrates the impact of human factors on medical errors. Further work should be done to evaluate the effect of this teaching at a postgraduate level.

References:
Evidence-based Medicine and Complementary and Alternative Medicine teaching in the UK medical courses: a national survey of the student experience

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Background and Purpose
With substantial public interest in complementary and alternative medicine (CAM), future doctors will need to provide evidence-based advice on their safety and efficacy. Informing medical students of CAM therefore becomes increasingly important. The purpose of our study is to determine the extent and context of teaching on evidence-based medicine (EBM), and complementary and alternative medicine (CAM) in UK Medical Schools from the student perspective.

Methodology
A 10-item anonymous questionnaire was produced online on ‘Survey Monkey’. The link to this web-based questionnaire was then sent to 28 presidents or sabbatical officers of medical student unions in April 2012. They were asked to forward the link to the education representatives for each year of their course. In May 2012, all student members of HealthWatch (n=52) and all medical students who entered the 2012 HealthWatch student prize competition for critical appraisal of clinical research protocols (n=114) were invited to complete the questionnaire and forward the link to fellow students. In the questionnaire we measured the following parameters: number of lectures on EBM; number of lectures or workshops on statistics; number of lectures or availability of student selected components (SSCs) on CAM; rating of CAM teaching as critical, uncritical or discursive; quality of feedback after placements with CAM practitioners.

Results
There were 93 student responses representing 25 different medical courses. 54% had received lectures on CAM in the core course. Of these students, 46% stated the lectures were ‘critical’, 16% ‘uncritical’ and 39% ‘discursive’. Of the 33 who reported on placements with CAM practitioners, 61% stated there was no feedback, 12% feedback with a specialist tutor, 15% with a non-specialist facilitator, 9% peer-led reflection, and 3% a tutor-marked written account.

Discussion and Conclusions
This study shows that EBM, statistics and CAM are covered in most medical courses to different extents. It is however concerning that under half the lectures on CAM, and only a third of the SSCs on CAM were critical and applied the principles of EBM. Most students reported that they received no feedback after placements with CAM practitioners. We demonstrate a need for UK curriculum coordinators to review and improve the teaching of CAM-related components in the undergraduate medicine courses.
Medical student case mix during final year 15 week GP placements.

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Background
The undergraduate curriculum at Keele University School of Medicine emphasises learning in community settings. In their final year medical students spend 15 weeks in general practice, during which it is expected that each student will consult with at least 375 patients with a wide variety of clinical conditions. Evidence within the literature about the case mix to which students are exposed in general practice is limited though there have been attempts to define what it should be [1,2,3]. It is important that students have a broadly equivalent clinical experience during their placements. We initially piloted the collection of diagnostic codes recorded for students’ consultations in a sample of practices before extending the study to increase the data available for analysis.

Aims
The aims of this study are to:

- Determine the number of patients with whom students consult
- Describe the mix of:
  - New and review consultations
  - Recorded diagnoses

Methodology
This is a retrospective study of clinical record entries of students’ consultations during their GP placements.

Analysis
The problems and diagnoses coded by students will be collated and compared.

Results
The results will be available at the conference.

Discussion
This data will allow us to better describe senior medical students’ clinical experience on general practice attachments, to determine whether there is comparability between practices and how this complements the clinical experience offered by hospital placements.

References
Medical Student Identification: Removing anonymity

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Background and purpose
With a changing tide around health care professionals uniform, identifying members of the multidisciplinary team in clinical areas has become very challenging for both health care workers and patients. This need for strengthened identification was in fact raised in the Francis report (2013). A lack of clear identification has understandably led to confusion regarding the role of individuals and expectations of them from other healthcare workers and patients, and episodes of miscommunication. For medical students this misidentification can put them in a vulnerable position and may be a limiting factor in initial participation and inclusion.

Methodology
Prospective observational study reviewing the impact of “MEDICAL STUDENT" labelled lanyards on student identification and inclusivity in a busy university hospital over a period of six weeks. The student cohort was divided into an intervention group, who wore the lanyards, and a control group who did not. The groups were matched according to year group and clinical environment. Quantitative data was collected pre and post implementation via structured questionnaire and analysed using descriptive statistics. Qualitative data was collected via focus groups and underwent thematic analysis.

Result
44 students completed pre implementation questionnaires, 25 and 19 were allocated to the intervention and control groups respectively. After the six week period the percentage of students in the intervention group who felt identifiable to staff increased from 20% to 89% compared to a decrease of 20% in the cohort group. Similarly the percentage that felt identifiable to patients in the intervention group increased from 12% to 84% compared to a rise of only 13% in the cohort group. This was supported by a decrease in the number of misidentifications from 80% to 37%, compared with a fall of only 19% in the control group. Qualitative data demonstrated great support and enthusiasm for the lanyards among both staff and students alike. Main themes identified included increased confidence and comfort in the ward setting.

Discussion and conclusions
Medical student lanyards have been successfully implemented in this university teaching hospital with a significant increase in students perceived level of identification. This is further supported by a reduction in the misidentification of students. Students and staff were very positive regarding the intervention, praising both the idea and potential impact on patient safety. We appreciate that this study is limited by its small sample size and relatively poor response rate however this is a positive initial study.

Prepared for practice? A national survey of UK foundation doctors and their supervisors

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Background
Mandatory induction for foundation year 1 trainees (F1s) was introduced in 2012 to ease the transition from student to doctor. The aims of this national study were to assess anxiety levels and preparedness in the 2012 F1 cohort and whether these varied according to medical school of graduation and foundation school of practice.

Methods
Online surveys were completed anonymously and voluntarily by F1s and F1 supervisors from participating foundation schools. Questions assessed how prepared F1s were for practice and how well they coped with the transition from medical school. A validated screening tool was used to assess anxiety levels.

Results
1829 F1s and 1145 supervisors participated. 27.8% of F1s screened positive for pathological anxiety. Increased time spent in a ‘shadowing’ type role during medical school and each additional day of induction reduced anxiety levels. How prepared F1s were for different aspects of their jobs varied according to medical and foundation school, from both the F1 and supervisor perspective.

Conclusions
How prepared F1s feel can vary according to the medical school of graduation and foundation school of practice. F1 anxiety may be reduced with a prolonged F1 induction programme and an extended shadowing period during the final year of medical school.
Bleep Roulette: An exercise in prioritisation and clinical decision making for final year medical students

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The benefits of simulated teaching scenarios are widely recognised. However, a discrepancy remains between what students have learnt at medical school and the daunting reality of facing an on-call shift. In particular, newly qualified doctors often feel less prepared for non-technical skills such as prioritising tasks, coping with stress, leadership and teamwork. As foundation doctors, we are well placed to advise future cohorts based on our own experiences. This strategy has proved to be a successful teaching method, receiving positive feedback from participants and reflecting the ethos of the General Medical Council’s guidance.

Bleep Roulette is a fast-paced, interactive teaching session that focuses on applying theoretical knowledge in a practical context. Using the framework of the students holding a notional “bleep” for a virtual evening and having to deal with a constant stream of typical conversations, tasks and clinical vignettes, we created Bleep Roulette as a novel and light-hearted way of simulating a night on-call.

We developed a simulator that bleeps the students every two minutes. One student must then answer the call, as the facilitators select a scenario that corresponds to that extension number. They play the parts of any nurses, laboratory technicians and other clinical or non-clinical staff that the students might encounter using all of their amateur dramatic skills. We emphasised efficient and sensible decision making, and encouraged students to discuss how they would prioritise the various tasks presented to them. Important elements also include keeping a ‘jobs list’ and handing over to their colleagues.

The feedback we received from students and the faculty was overwhelmingly positive and the session was a welcome addition to the didactic teaching sessions often run by junior doctors. We aim to demonstrate this work as an example of how an exercise in triaging real-life scenarios is an excellent learning tool which would improve the preparation of final year medical students for starting work.

References:
Background and Purpose
It has been reported that patients on intravenous fluids and electrolytes frequently suffer complications due to inappropriate administration, yet only a minority of FY1 doctors are adequately trained in this area\(^1,2\). Precision Teaching (PT) has been shown to be an effective intervention to assess teaching method effectiveness and evaluate learning outcomes. SAFMEDS (Say All Fast Minute Every Day Shuffled) is a practice/assessment procedure within the PT framework to assist learning and fluency\(^3\). We explored the effects of a brief intervention with PT to impart high frequency performance in safe intravenous fluid prescription in a group of final year undergraduate medical students.

Methodology
133 final year undergraduate medical students completed a multiple choice question (MCQ) test on safe IV fluid prescription at the beginning and end of the study. The control group (n= 76) of students were taught using a current standardized teaching method. Students allocated to the intervention arm of the study were additionally instructed on PT and the use of SAFMEDS. The study group (n = 57) received 50 SAFMEDS cards containing information on the principles of IV fluid prescription within clinical scenarios. These students were trained/tested twice per day for 1 minute.

Results
The study group displayed an improvement in fluency and accuracy as the study progressed. There was a statistically significant improvement in MCQ performance for the PT group compared with the control group between the beginning and end of the study (35% vs 15%; p<0.05).

Conclusion
These results suggest PT employing SAFMEDS is an effective method for improving fluency, accuracy and patient safety in intravenous fluid prescribing amongst undergraduate medical students.

References
Tutors’ and Students’ Perceptions of a Foundation Year Doctor (FYD)-Led Teaching Programme for Clinical Medical Students

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Introduction
The development of foundation year one and two doctors (FYDs) as teachers is advocated by the General Medical Council, and near-peer teaching schemes are now well recognised to provide benefits for both students and teachers alike. We sought to determine perceptions of a large FYD-led clinical teaching scheme for third year medical students at a university teaching hospital after two years of implementation and development.

Methods
Following a pilot in 2012, an eight week teaching programme was run from September to November for two consecutive years. Responsibility for organisation and management of the scheme was undertaken by a FYD. Eighty four third year medical students and 71 FYDs based at Queen Elizabeth Hospital Birmingham participated. Students were organised in groups of five or six and allocated to 17 different clinical examination or data interpretation sessions. FYDs were provided with significant flexibility in teaching format and contact to arrange the session was student-initiated. All participants were contacted after the final week of teaching to provide feedback; paper questionnaires were distributed to students and online questionnaires emailed to FYDs.

Results
Sixty two medical students (73.8%) and 44 FYDs (62.0%) responded to the questionnaire. Almost all students (96.8%) considered the teaching scheme useful and reported improvement in both their ability to examine patients (98.4%) and theoretical knowledge (96.8%). Whilst 98.4% of students reported improved knowledge of the physical examination itself, only 59.7% felt that the scheme had improved their ability to form a differential diagnosis. The majority of students (91.9%) felt there were advantages to being taught by FYDs. The most frequently mentioned were their approachability and familiarity with the students’ level of knowledge. In addition, 95.5% of FYDs found the scheme a rewarding experience and 93.3% reported a subjective improvement in their teaching ability.

Conclusion
This FYD-led teaching scheme has become a well-established part of the student curriculum at Queen Elizabeth Hospital Birmingham. Due to the success of the programme, a similar scheme has now been implemented for fourth year students and the initial feedback for this will be available by April 2015. Despite the intensity and unpredictability of FYD workload, involvement in a flexible teaching programme can provide many benefits for FYDs including an improvement in teaching skills, time management and job satisfaction. Organisation of such schemes at an FYD-led level is not only feasible but provides vital development in management and leadership skills.
Background and Purpose
Gross anatomy has repeatedly been described as the ‘cornerstone of medical education’ and is said to underpin clinical practice. For over half a millennia, cadaveric dissection has been instrumental in the teaching and learning of anatomy, with 20 out of 25 UK medical schools utilising dissection as part of their anatomical teaching in 1992. However, debates have arisen on how to best teach medical students anatomy, with a recent emerging trend demonstrating that many medical schools have abandoned the practical, hands-on approach of cadaveric dissection from their medical curricula.

Therefore, in light of the reform in anatomy pedagogy and the continuing debate regarding the utilisation of cadaveric dissection, a literature-based enquiry was conducted to look at the possible impact of removing cadaveric dissection from a medical curriculum.

Methods
A literature-based enquiry was developed with the intention of capturing medical students’ and anatomists’ perceived benefits and drawbacks of cadaveric dissection, and from this, insights could be made into the possible educational impact of teaching and learning without dissection.

The study took a post-positivist paradigm stance. Relevant papers were identified using a defined database search strategy that included boolean operators, truncation and phrase searching. Literature was captured from Medline, Embase, Scopus and three ProQuest databases, together with a manual review of the literature. Strict inclusion and exclusion criteria were implemented, and data was critically appraised using the Evaluation Tool for Qualitative Studies. Finally, Thematic Analysis was used to synthesise and present the data under thematic headings.

Results
Twenty-three papers were retrieved that met the full inclusion criteria. Findings indicated that medical students’ and anatomists’ perceived the benefits of dissection to be within the broad themes of Knowledge (understanding of the human body), Skills (clinical and learning skills) and Attitudes (comprehension of human life and death). Similarly, medical students’ and anatomists’ perceived the drawbacks of dissection to fall within the themes of Emotional Reactions (cognitive and physical reactions) and Practical Reactions (reactions from cadaveric contact).

Discussion and Conclusions
Findings give an insight into what might be ‘lost’ if cadaveric dissection were to be completely cut out of the undergraduate medical curriculum. If this happened, steps must be taken to fill in the potential gaps in students’ anatomical knowledge and learnt skills in addition to the possible loss in their personal and professional development. Recommendations are made on how this can take place, and suggestions are made for future research.

References
Theatre Training Tool: A Novel Way of Improving the Undergraduate’s Operating Theatre Experience.

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Background and Purpose
The operating theatre can be a complex and intimidating environment, in which medical students often feel ill prepared and unsure of their learning needs\(^1\). There are numerous challenges: the demands of a stressful physical environment, ascertaining the educational role of theatre experience, and negotiating a professional role within the theatre workplace\(^2\). Our aims were to improve student perception and participation in theatre, to enable their incorporation into the theatre team, to define their roles, and to improve knowledge of theatre-related themes not covered elsewhere in the curriculum.

Methodology
A mixed methods cohort study was performed to look at the impact of a new multilevel theatre training tool on undergraduate medical students. The training tool comprises of 7 staged teaching sessions, a theatre workbook and a logbook of essential procedures. Students who received the tool were assessed both before and after this intervention using:

1. A 16-question assessment testing theatre-related knowledge;
2. A student satisfaction questionnaire using forced-choice and open questions;
3. Semi-structured interviews and focused groups on student experience in theatre.

Questionnaires, interviews and focused groups were examined by two observers using qualitative methods via the identification and extraction of recurring themes.

Results
The theatre tool was trialled over the 2014/15 academic year. The pilot group was a cohort of 2\(^{nd}\) year undergraduate students on their surgical placement. Themes that emerged from pre-intervention questionnaires and interviews include operative visibility, active participation; a need for pre-defined learning objectives and feeling ill-prepared for the learning environment. Post-intervention students reported overall enthusiasm with the programme: 100% agreed it positively impacted their theatre experience. Emerging themes included more confidence within theatre, enhanced surgeon-student relationships and a clearer identification with their learning needs. Their mean examination score increased from 11.9\% pre-intervention to 46.7\% post-intervention (n=11, p<0.01, Relative Risk 3.24 – 95\%CI 2.41-4.40).

Discussion and Conclusions
Undergraduate medical students on a surgical firm have more than 50\% of their timetables dedicated to theatre time. Whilst enthusiastic about surgery, students often find theatre a difficult environment with little educational benefit. Simple measures within a carefully designed theatre training programme can turn an alien setting into an attractive learning opportunity.

References
Exploring student and staff understanding and attitudes to feedback within medical education: a mixed approach method

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Background
Feedback is a very powerful educational tool (1) and its use within medical education has been advocated in the GMC guidance “Tomorrows Doctors” (2). However, the well-publicised National Student Survey has shown low levels of satisfaction across all institutions (3). This finding is echoed by existing research which shows feedback can be too vague (4), non-specific (5) or not as effective as perceived by staff (6). There is a lack of current research into attitudes towards feedback within medical education. This study aims to address this and consider areas for improvements or further research.

Methodology
All 1st and 2nd year students and corresponding staff (lecturers and personal tutors) at Leicester Medical School were invited to participate. The study utilised two research methods. Firstly all participants completed an online survey of likert scale questions assessing their understanding of and satisfaction with feedback across the curriculum. Subsequently participants were asked to take part in semi-structured interviews which explored feedback experiences and attitudes. The quantitative data was analysed using Excel and SPSS. Thematic analysis of the interview transcripts was performed using NVIVO.

Results
This study shows that the principles of feedback are valued and understood by students and staff alike. Students disagreed that the feedback that they receive is sufficient, effective, timely or specific. Interestingly, staff members were overall more satisfied with the feedback that they provide than students were to the feedback they receive to a statistically significant level. Mutual areas of satisfaction included feedback associated with formative assessment and simulated patient sessions. Mutual dissatisfaction was identified with summative assessments and this was the predominant area discussed by many interviewees. There was a common recognition of resources and student numbers as a barrier to providing more effective feedback.

Discussion and conclusion
The study challenges pre-existing concerns that students do not value feedback. Students considered feedback to be highly important and were able to articulate their experiences well. Whilst there was evidence of some areas of good practice such as in-course feedback, for high stakes assessment, feedback is not currently meeting the needs of learners. Evidence from this work indicates that efforts to increase specificity and personalisation would be well received. Other areas for consideration are the use of modern technology, increased training and revision of the personal tutor role. All new developments should strive for efficiency in light of the universal and enduring resource limitations.

References
2. GMC Tomorrows Doctors accessed at http://www.gmc-uk.org/education/undergraduate/tomorrows_doctors_2009.asp on 11.01.15
Student and Staff Perceptions of Team-Based Learning

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Background and purpose
Team-based learning (TBL)\textsuperscript{1,2} is a pedagogical process that has been recently implemented into the General Practice and Community Medicine (GPPC) curriculum at Dundee Medical School\textsuperscript{3}. This is the first qualitative study to be done, with medical students from the UK, regarding how students and staff perceive this process. The study aims to elicit ideas and insights from interviewees that may inform curriculum content and processes for the future.

Methodology
Semi-structured interviews are being used to ascertain both student and staff perceptions of TBL. The presentation will briefly describe the basis of TBL as well as demonstrate how TBL fits in with current educational theory.

Results
Data gathered from interviews of students between years 2-4 and staff involved in TBL delivery will be presented for discussion.

Discussions and conclusions
There will be opportunity to further discuss the process of TBL, the validity of the data gathered and the potential to implement change in the TBL process based on the conclusions.

References
3- University of Dundee. GPPC- Years 1-3- Systems in Practice. https://mbchb.dundee.ac.uk/dundeegp (accessed 11/01/15)
Adopting the true aviation simulation-training model: Does a ‘scenario briefing’ improve learning outcomes in simulation training with medical students? A pilot study

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Full ethical approval was granted for this study.

Introduction and Purpose
Simulation based medical education (SBME) has been enthusiastically adopted as an effective tool in healthcare education internationally and a robust body of literature continues to support its exponential use [1]. SBME has been widely promoted to enhance interdisciplinary learning and training in human factors following lessons from the aviation and astronaut industries where simulation helps to achieve a multifunctional system approach [2]. Although we have embraced the concept of simulation training from the aviation industry, differences are apparent. Within many aviation models, trainees are briefed prior to scenarios and knowledge for simulations imparted beforehand. This is often not the case within SBME where the success of the scenario can be dependent on students’ knowledge. The aim of this study is to explore whether a model adhering to this aviation simulation-training model promotes learning on human factors.

Method
28 fifth year medical students from the University of Bristol based at Gloucestershire Academy were study participants in this crossover pilot study. Students were assigned to two groups. Group A received a simulation session covering three scenarios. Group B covered the same scenarios after a 45-minute subject and scenario briefing. Both groups had 15-minute debriefs following each scenario. Group A then received a simulation session with three different scenarios following a briefing. Group B received the traditional simulation session. Feedback questionnaires asked students to evaluate their confidence in the scenarios covered, enjoyment of the session and main learning outcomes. Independent educators were blinded to which group had received scenario briefings and were asked to evaluate performance of students in simulation scenarios based on knowledge, skills, communication and appreciation of human factors.

Results
Student feedback and comments and the evaluation of student performances by the blinded observers will be presented. Focus will be on whether students’ knowledge, skills and attitudes changed depending on whether a scenario briefing was delivered.

Discussion and Conclusion
Over the last 20 years, 70% of airline accidents and incidents are attributed to failures in skills including crew coordination, workload management, and decision-making whereas individual technical proficiency was not a principal factor. [2] Aviation removes the focus of simulation training from knowledge to team performance. In medicine, thousands of deaths result from human error. Simulation must promote team performance and skills practice and move away from knowledge acquisition. The simulation model presented in this study places greater emphasis on this.

References
2) Hamman,WR. The complexity of team training: what we have learned from aviation and its applications to medicine. Quality Safety Health Care, 2004. 13(Suppl. 1): i72–9
“The Courtroom:” A novel teaching method using debate to integrate professionalism into undergraduate teaching

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Ethical approval was not required for this study.

Introduction and Purpose
Professionalism is embodied in the Hippocratic Oath and is intrinsic to medical practice. Papadakis demonstrated the importance of promoting professional behaviour in medical students through identifying a possible link between unprofessional behaviour in medical school and future practice. [1] Teaching on professionalism and its integration into undergraduate curriculum remains challenging. This reflects the huge range of professional advice to integrate into the curriculum and the need to instill students with the skills required for self-directed continuing professional development. [2] The literature promotes the use of debate as a teaching tool to cultivate learner confidence, team working abilities, development of empathy and formulation of opinion based on evidence. [3, 4]

An initial pilot study of 29 third year medical students from the University of Bristol used debate in the style of a “Courtroom” to teach professionalism. This received very encouraging feedback from students. The aim of this study was to explore whether students prefer learning about professionalism via lecture-based teaching or debate.

Method
The study was a crossover study. 30 third year medical students from the University of Bristol based at Gloucestershire Academy were divided into two groups.

Two different teaching modalities were used to deliver four issues surrounding professionalism:
1) Lecture using PowerPoint
2) “The Courtroom.” A fictional courtroom to explore different ‘cases’ where professional behaviour of case characters was in question. Students in teams; prosecution, defense or jury, prepared case presentations using “supporting evidence” and relevant professional guidance.

Group A received teaching on social media and confidentiality in “The Courtroom.” Group B received teaching on the same issues via lectures. Group B then received teaching on dress code and attitudes and behaviours in “The Courtroom.” Group A received lectures on these topics.

Students completed evaluation forms. They were asked to rate how much they felt they had learnt, session enjoyment and for additional comments.

Results
Results of the crossover study comparing feedback from those students who received lecture teaching and those who received “The Courtroom” will be analysed and presented.

Discussion and Conclusions
In a culture of constant revalidation, integration of teaching on professionalism is crucial in undergraduate medical education to build foundations for continuing professional maturity. The use of debate in the style of a “Courtroom” to deliver student focused, thought provoking and animated teaching on professionalism is compared to traditional lecture-based teaching in this study.

Reference
**Individualised student experience in Obstetrics: Is it feasible?**

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**Background and Purpose**

Improving medical student experience in obstetrics and gynaecology is crucial, as positive student experience influences future career choice\(^1\). Accordingly, the Royal College of Gynaecologists and Obstetricians clearly advises that labour ward experience is essential for undergraduate MBChB students\(^2\). We proposed a structured one-to-one student assistantship to improve student experience of antenatal, intrapartum and postnatal care called “Your Student Assistant”. Each student involved in this proposed assistantship would be attached to a pregnant woman in the third trimester and participate in all aspects of care including labour and delivery. Our study qualitatively assessed the feasibility of “Your Student Assistant”.

**Methodology**

Methods included anonymised standardised questionnaire surveys and a multidisciplinary staff focus group aimed at assessing the feasibility, benefits and limitations of “Your Student Assistant”. We invited stakeholders in the Obstetric medical student experience and Labour Ward to participate, and results include 51 pregnant women, 80 medical students and 32 staff members.

**Results**

Firstly, pregnant women agreed that they were more likely consent to a “Student Assistant” (88.2%) taking part in their care than to medical students whom they had not met prior to labour (52.9%). Secondly, we found that 80% of students agreed that the opportunity to become a “Student Assistant” on the Labour Ward would improve the overall educational experience. Finally, we found that staff supported the concept and felt it promoted patient-centred care as well as the students’ educational experience. However, they had concerns that it was not feasible on a large scale and so should only be offered as an extra opportunity to those with an interest in obstetrics.

**Discussion and Conclusions**

While previous work has found that antenatal discussion of future medical student involvement in care has no impact on rates of consent\(^3\), this scheme provides the student with a unique opportunity to develop rapport with the patient. This is important in gaining consent to carry out practical procedures and ensure a well-rounded labour ward experience\(^4\). Stakeholders generally supported the concept of “Your Student Assistant” and expressed perceived benefits, including continuity and rapport, and barriers, including unpredictability and disinterest. In order to assess the real-world value of this scheme, a pilot “Your Student Assistant” scheme, with limited student numbers and with patients booked for induction of labour, should be undertaken.

**References**

The Compass Medicine- The disk on every desktop

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Background
Diagnostic synthesis is an important part of the medical curriculum, an issue recognised by the GMC (Tomorrows Doctors, 2009). Despite the proliferation of multidisciplinary working, the responsibility for making diagnoses rests mainly with the medical staff. However, compared to the time spent learning and regurgitating large amounts of information, little time is spent making explicit the process of diagnosis.

The ‘Compass Mentis’ is a development of the Surgical Sieve. It is a handheld device that prompts the user to consider candidate anatomical sites, pathological processes, and possible aetiological factors, with a view to generating diagnoses which are wide ranging and detailed but still patient-focused.

Aims
To evaluate the use of the Compass Mentis as a novel method of teaching the process of diagnosis.

Methods
287 second-year medical students were taught the use of the Compass Mentis at Cardiff University School of Medicine. Students were asked to complete both a pre and post teaching survey assessing confidence and familiarity with the process of generating diagnoses before and after the teaching session. Students were also asked to rate the usefulness of the Compass Mentis as an aid to diagnosis as well as their perception of the overall teaching session delivered.

Results
Median score for confidence with diagnostic thinking before teaching was 3.0 compared to a median score of 7.0 after teaching (p<0.001). Median score for familiarity with a form of diagnostic aid before teaching was 3.5 compared to a median score of 8.0 after teaching (p<0.001). Median scores for usefulness of the Compass Mentis and overall quality of teaching was 8.0(sd 1.4) and 8.0(sd 1.6) respectively.

Conclusion
This is the first time the Compass Mentis has been studied as part of a teaching module. Student feedback was extremely positive. This concept has since been integrated formally into the new C21 curriculum at Cardiff University, being delivered to all students in years 1 to 3.

We believe that there is a need for useable, memorable and robust tools as such for medical students and junior doctors to ensure that at the bedside, they have a method for finding the questions needed to reach a diagnosis.

Reference
Feeling prepared for the challenge? Trainee preparedness for transitioning from medical school to clinical environments

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Background and Purpose:
Although feelings about preparedness for new roles aren’t always exact predictors of future performance, an important outcome for undergraduate education is that trainees feel prepared for the intern year. The Irish Medical Council explored this topic with transitioning trainees in its first National Trainee Experience Survey, “Your Training Counts”, to help inform any resultant quality improvement strategies.

Methodology:
“Your Training Counts” replicated several questions from the work of the UK Medical Careers Research Group¹ to help measure perceptions of preparedness for the intern year, to see how problematic any perceived lack of preparedness was, and to gauge how trainees felt about specific aspects of the intern year.

Responses were analysed to examine relationships between transitioning trainees’ perceptions and other variables, such as gender, the medical school graduated from, and overall views on clinical learning environments (as measured by D-RECT²; which scores clinical learning environments between 50-250, with higher scores denoting more supportive learning environments).

Results:
49% of trainees felt their medical school education prepared them well for the intern year. There were no significant variations due to gender, entry routes to the profession, or medical schools from which trainees graduated. Whilst a high proportion of interns felt well prepared regarding clinical knowledge (79.8%), in the domains of physical/emotional demands (25.6%) and administrative tasks (18.4%), only a minority of interns felt well prepared.

Trainees who felt under-prepared for the intern year reported significantly lower D-RECT scores than those who felt well-prepared (mean scores of 138 compared to 162); suggesting they had considerably poorer experiences of intern learning environments.

54% of trainees, who felt under-prepared for the intern year, said it had been a medium-sized or serious problem for them. How these problems directly impacted on trainees was not explored, however, feeling under-prepared for the intern year was significantly associated with more frequent experiences of being bullied in post, lower levels of wellbeing and increased desire to leave medical education in Ireland. For example, 14% of trainees who felt under-prepared said they were definitely not going to stay in medical education in Ireland (compared to 5% of trainees who felt well-prepared).

Conclusions:
The transition from medical student to intern is a challenging step for doctors in training, and rightly so. However, where overly problematic challenges have been identified, healthcare organisations must address these and make arrangements to help smooth transitions for trainees.

References
1. UK Medical Careers Research Group. http://www.uhce.ox.ac.uk/ukmcrg/
Improving learning for medical students in the clinical environment: use of a structured written feedback proforma

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Background and Purpose
Significant growth in clinical knowledge and skills is acquired only through effective feedback\textsuperscript{1-3}. In its absence, unsatisfactory performance goes uncorrected and good performance is not reinforced\textsuperscript{4}. Effective feedback focuses on specific behaviours, identifies strengths and offers explicit recommendations for improvement\textsuperscript{5,6}. To achieve reliable judgements on performance in clinical learning environments, feedback ought to be delivered by a number of assessors across a range of cases\textsuperscript{4}. It is known that the use of pre-structured evaluation forms can enhance efficiency and effectiveness\textsuperscript{7} and those with free-text fields are superior to checklists and scores as they are flexible, taking into account individual learning goals and case-specific factors, and avoiding trivialisation\textsuperscript{4,8}. Since many trainers have not been taught to deliver feedback, proformas also provide structure and guidance to maximise the effectiveness of feedback and learning value of clinical encounters\textsuperscript{2}. This study aims to determine whether a structured feedback proforma improves the quantity, immediacy and impact of feedback upon learning and performance in medical students.

Methodology
Data are collected prospectively from third year Bristol medical students during their general medicine & surgery clinical attachments at two tertiary centres in Bristol & Gloucester using focus groups and a student logbook. The logbook records the type of clinical encounter, any feedback provided, and students’ perceived learning. Baseline data has been collected: 2 students piloted the logbook; 10 students participated in focus groups. A larger study will take place over 6 weeks across both hospital sites. At 3 weeks, a structured feedback proforma will be introduced that prompts students to ask for both positive reinforcement and constructive criticism. Data will be analysed to evaluate the effectiveness of the feedback proforma.

Results
The pilot demonstrated that feedback was given to students in 46% of their clinical encounters. 83% of the feedback was verbal and 17% was written. When given feedback, the clinical encounter was rated at 3/3 (very helpful). The clinical encounters where feedback was not provided were rated at 1/3 (not helpful) and 2/3 (average).

Results from the full six week study will be presented.

Discussion and Conclusions
Initial results show that less than half of clinical learning opportunities provide feedback to medical students. When feedback is given, the learning experience is perceived to be of better quality. This study will evaluate the use of a flexible written feedback proforma in driving medical student training in the busy, challenging learning environments found in tertiary hospitals.

References
A fine arts competition in medicine: impact of an undergraduate art exhibition on medical students’ experience of training

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Background and Purpose
Historically art has played an important role in the advancement of medicine. Charcot looked towards ancient and medieval paintings to document known syndromes and drew and photographed his own patients. The use of visual arts in medical education has resurged in recent years. A number of studies describe how programmes focused on developing skills in observing fine art improve observation, description and interpretation of visual information in the clinical environment. Anecdotally it is known that medical students draw to consolidate their learning of anatomy. This project will attempt to celebrate the creation of fine art amongst Bristol medical students in an exhibition and to explore the effects on their clinical practice.

Methodology
Medical students from the University of Bristol are invited to submit works of art for an exhibition with the theme ‘anatomy and physiology’ accompanied by a 100-300 word description. Art will be judged against both artistic and medical criteria by doctors and an artist. The exhibition will be held in The Male Edwardian Toilets, an exhibition space in Bristol, over three to four days. After the event, interviews and a survey will be used to explore the students’ experience of creating and displaying medically inspired art.

Results
Images of the art work and the exhibition will be presented along with data from the artworks’ descriptions, participant surveys and interviews.

Discussion and Conclusions
The appreciation of art has had positive effects on observation skills and descriptive abilities. This project will look to see if these benefits are replicated through the creation of art.

References:
4 Shapiro J, Rucker L, Beck J. Training the clinical eye and mind: using the arts to develop medical students' observational and pattern recognition skills. Medical Education, 2006, 40:263-268
Near peer teaching in medical student simulation: an underused resource?

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Background
Simulation is an effective learning tool, improving knowledge, skills and confidence in healthcare professionals\(^1\), while protecting patients from unnecessary risk\(^2\). Simulation forms a valuable part of the medical curriculum and is generally delivered by senior faculty members. Previous studies have suggested that junior doctors are as effective in debriefing medical students as more experienced faculty members and bring unique advantages compared to senior clinicians\(^3\). We set out to pilot a near peer simulation programme at Royal Cornwall Hospital (RCH).

Methodology
During the 6-week simulation course, foundation doctors at RCH taught A-E assessment of critically ill patients to 3\(^{rd}\) and 4th year medical students. All learning materials and lesson plans were validated by a Consultant Anaesthetist at RCH. We aimed to obtain both objective and subjective evidence of any improvement in both students and teachers as a result of the course. Students and teachers were assessed with pre and post-session tests, which objectively assessed knowledge of NICE/local guidelines and subjectively assessed the candidate experience and confidence using visual analogue scales.

Results
The results from the 6-week simulation course are extremely positive, demonstrating a substantial improvement in knowledge and confidence. Student knowledge of NICE/local guidelines increased by an average of 30.6% over the course. Student confidence in managing a patient within the simulation environment improved by 31.5% and within the hospital environment by 40%. Students also demonstrated a 25% increase in confidence of when to escalate to a senior and a 21.5% increase in confidence of working within a medical emergency team. Foundation year one doctors demonstrated a 21% increase in knowledge of clinical guidelines, whilst foundation year two doctors demonstrated an 18% increase over the course.

Discussion and Conclusions
Near peer simulation teaching is beneficial to students and teachers, improving knowledge, confidence and communication skills. It provides a unique learning experience offering an informal teaching environment to compliment the traditional consultant led sessions. Foundation doctors are immediate role models for students, well placed to teach human factors and offer guidance on issues specific to newly qualified doctors. We plan to evaluate the long-term retention of skills learnt during these sessions, and to compare the performance of students enrolled on the near peer course with those not enrolled. We hope to formally run this course alongside the existing simulation teaching sessions incorporating multi-disciplinary teams to further develop teaching in human factors.

References
Using Feedback Postcards as supervised learning events to explore how attitudes to feedback-seeking develop as students approach practice

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Background and purpose
Providing effective, relevant feedback enhances teaching and learning¹. However, graduating MBChB students have given poor ratings for feedback in the National Student Survey 2012-2014, despite increased emphasis on feedback within programme guides and policies. Feedback may be perceived to have more value if it is specifically sought. Feedback-seeking can be defined as making a conscious effort to proactively obtain feedback on one’s behaviour to attain a desired goal². In the context of business and management it can also improve motivation, engagement, learning and performance. Feedback-seeking is more common and has more perceived value in younger, less experienced people in an organisational context³, possibly as a way of reducing uncertainty⁴. However, this has not been studied in medical education. We explore how feedback-seeking develops during the undergraduate medical degree and how students feel they can develop and refine their ability to seek effective feedback.

Methodology
This is a mixed methods study using action research and constructive grounded theory⁵ approaches. We have developed a system for students to proactively seek and record feedback in the clinical setting in years 3 and 5 of a 5-year medical degree using Feedback Postcards with Supervised Learning Events (SLEs). Qualitative data has been gathered from staff and student questionnaires, focus groups and interviews using barriers to seeking feedback, motivation to seek feedback, staff and student opinions on feedback seeking and perceived influence learning. NVIVO was used for analysis.

Results
Students in year 5 appear to be more proactive in seeking feedback compared to year 3. They also appear to seek feedback more frequently with time. We explore this in detail in relation to themes such as overcoming barriers to seeking feedback, ability to self-assess and ability self-regulate. We also explore staff opinions on students seeking feedback and student and staff opinions on how feedback-seeking can be promoted.

Discussion and Conclusion
Initial evaluation suggests that students and staff perceive that the Feedback Postcards helped to overcome barriers to feedback-seeking. Students feel they encourage balanced feedback discussions about their performance which can increase learning opportunities, refine their knowledge, uncover specific areas for further development and allow them to demonstrate their performance. We also discuss how feedback seeking develops with time and how it can be further promoted.

References
Video feedback for remedial students at final MB mock OSCE

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Background
Students at Queen’s University Belfast sit their final MB OSCE’s in February of Final Year. There is an opportunity to resit the examination in June if necessary. We were concerned that situational anxiety and difficulties with “OSCE technique” could be important components of why they had performed poorly. The technique of video feedback has been used to improve performance in sport and education. We thought that it might be of particular use in this situation.

Aim
To introduce and assess the effectiveness of a mini mock OSCE exam under exam conditions with video feedback.

Method
In February 2014 9 of our final year students failed the final MB OSCE. In addition to the usual remedial clinical teaching and attachments we introduced a mini mock OSCE exam. 8 of the students chose to participate and gave written consent to the visual and audio recording. They completed 3 eight minute stations from our local OSCE bank. These were history taking and management of a patient with dysphagia, examination of a patient with a sore back and sciatica and prescribing IV fluids for a patient with sepsis. At each station the student was filmed using an iPad. At the end of the series they revisited the stations in turn to watch the footage along with the examiner and to receive individual feedback using the actual station mark sheet. The students were asked to fill out a questionnaire at the end of the session regarding the video feedback.

Results
All students found the exercise very helpful. They commented on the benefit of seeing how the examiners awarded scores and how they matched up on the video. The examiners at the stations said that their feedback could be clearly directed and focused. All 9 students (including the one who did not participate) passed the repeat exam.

Conclusion
We recommend video feedback of mock OSCE’s as an engaging aspect to improving performance.
Background and Purpose
It is well documented that over 50% of medical students graduating from UK Medical Schools continue to feel unprepared for medical practice on graduation. These difficulties are thought to arise due to a mismatch between the outcomes in “Tomorrows Doctors” and the actual requirements of professional practice. Adjustments in medical curricula and professional standards have limited students' ability to take responsibility for patients and therefore experience the pressure of foundation training. Specific areas of weakness are prescribing, management of acutely unwell patients, prioritising, time management and administration. This has been partially addressed with the introduction of assistantships however, the positive features of simulation make it an attractive option to maximise preparation. A novel simulation course (Simulated Ward round And Professional Skills) has been developed at Warwick Hospital to address these deficits.

Methodology
Foundation doctors completed a questionnaire that identified areas of their professional practice for which they had felt inadequately prepared. Using this information we developed a simulation course for final-year medical students exposing them to the situations highlighted as important. Simulation scenarios covered eight clinical learning domains including prescribing, prioritising clinical workload, documentation and discharge, clinical handover and breaking bad news. Participants were required to help conduct a simulated ward round, rank and complete tasks and react to the changing ward environment. Subsequently they were given individual feedback to optimise their learning. Students completed qualitative questionnaires pre- and post-course regarding their confidence in each of the learning domains and completed an evaluation of the course.

Results
47 final year students training at Warwick Hospital completed the course. All students found the course realistic, useful, and enjoyable, and all "would recommend it to a peer". A paired-samples t-test was conducted to evaluate the impact of the course on the student’s confidence across 8 learning objectives. There was a statistically significant increase in confidence within all domains (p<0.05).

Discussion and Conclusions
Simulation allows students to develop skills required for clinical practice in a safe environment. The SWAPS course exploits this and increases student confidence in key domains highlighted as concerns of current Foundation doctors. We intend to expand the project to all students training in the surrounding hospitals; explore the potential for using the framework to simulate different scenarios e.g. orientating new students to the clinical environment; and collect feedback from doctors who have completed SWAPS to analyse the impact on their transition to professional practice.

References
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3. General Medical Council How prepared are medical graduates to begin practice? 2008 London GMC
A skill to be worked at: exploring the process of learning from role models

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Background and Purpose
Within medical education role modelling is widely accepted as being an effective teaching and learning method, particularly for developing professionalism1. Several studies have investigated what medical students and trainees learn from their role models, in terms of skills, behaviours and attitudes2. Through our research we are currently exploring the largely neglected but important question of how medical students learn from role models. We want to investigate:

- What are the processes occurring in clinical settings that support learning from role models and what hinders it?
- What strategies do role models consciously apply to encourage their learners to learn in this way?
- What approaches do learners take to analyse, evaluate and adopt or reject what they learn through observation of and engagement with role models?

Interviewing medical students is part of a wider project involving clinical teachers at both trainee and consultant level. We believe that insight into the commonalities and discrepancies between medical students’, trainees’ and consultants’ conceptions of how individuals learn through role modelling will enable us to recommend ways that this intuitively popular teaching method could be more systematically and effectively used as part of medical curricula.

Methodology
One-to-one semi-structured interviews were carried out with final year medical students to explore how they learn from clinical teachers. These were audio recorded, transcribed and thematically analysed.

Results and discussion
Student accounts revealed several factors that supported learning from role models including exposure to role models, role models’ approachability and willingness to share their insight. Barriers to learning included lack of continuity in clinical teachers and being overlooked.

Students used various strategies to help them learn from role models including identifying someone who they understood to be respected by colleagues and patients and distinguishing between those who held immediate and future value. They described reflecting on what they had observed and identifying opportunities to put this into practice.

Students reported that the ability to learn from role models was a skill that needed to be developed and that students needed to be proactive in order to gain access to role models. This appeared to be most challenging for more junior students. Students also identified student role models that appeared to assist them in navigating the hidden curriculum.

Conclusions
Findings from this research will be used to make recommendations for both students learning from role models in clinical settings and staff who support them.

MedSoc Teaching: A Revolution in Teaching?

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Background and Purpose
MedSoc Teaching was founded to provide the highest quality peer-led teaching to University of Nottingham medical students. This high standard was achieved by analysing the factors and common pitfalls that contribute to, as well as inhibit, great teaching.

Through this we created an innovative two-tier guide as the foundation of all our teaching sessions, which if followed would make anyone into an excellent teacher.

- **TIER 1** focuses on basic delivery skills: speed, repetition and handout/whiteboard skills.
- **TIER 2** involves more advanced skills focused on 1) explanation and conceptual techniques (such as analogies, etymology and visual stories), 2) memory and retention techniques (such as mnemonics, associations and limbic system-focused techniques) and 3) audience engagement.

Methodology
The 2nd year module FBN (Functional and Behavioural Neuroscience) was one of the conceptually hardest modules in the undergraduate medical course and so we introduced a 6 week peer-led neuroanatomy course, covering the main areas of the curriculum, each week containing 3x30 minute sessions.

Our innovative teaching techniques were the foundation of this teaching, particularly those focused on explaining difficult core-concepts. Students were selected to teach via a rigorous application/interview process, based on their skills at teaching and using our novel teaching techniques.

To assess the effectiveness of our intervention and techniques, we analysed the FBN exam results for the respective two years of our intervention. We also monitored the weekly feedback, student attendance and number of views of our teaching resources.

Results
Within the first two years of starting the neuroanatomy course in 2012, the mean exam mark of the FBN module increased by 10% from 56% (2011) to 66% (2012 and 2013). Statistical analysis showed this to be statistically significant (p-value< 0.01).

Furthermore the percentage of students with 1st class marks drastically increased, approximately 11 fold, after the first year of our course, from 7 students in 2011 (2.7% of cohort) to 79 students in 2012 (31% of cohort). This was increased to approximately 14 fold in 2013, with 97 students (39% of cohort) getting a first-class award.

Discussion and Conclusions
Our teaching potentially had a very significant effect on the module exam results, through better student understanding and learning of these very difficult-to-grasp concepts. The student feedback also demonstrated the extremely positive potential of our teaching methods and how anyone can be a great teacher if you follow certain key principles. However, further research is required in order to better evidence the impact of our teaching on student performance.

Acknowledgements
*Many thanks to Professor David Kendall, the late Professor Terry Parker and Emma Brown of the University of Nottingham for all their kind advice and their help in providing the cohort exam data.*
Practising practice: Evaluating the effect of a ward-based simulation exercise on students’ educational goals in a subsequent out-of-hours placement

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Background and Purpose
Despite the introduction of shadowing placements and student apprenticeships newly qualified junior doctors often feel underprepared for their role, particularly regarding decision making, prioritisation of workload and time management. Out-of-hours shifts are an area that commonly concerns medical students and Foundation 1 (F1) doctors. There remains a need to improve the transition from undergraduate to Foundation 2. To support learning within an out-of-hours clinical placement, we implemented a ward-based simulation exercise to provide students with a realistic experience of the junior doctor role within a controlled environment. This evaluation aims to understand the impact the ward-based simulation exercise had on medical students’ experience of a clinical placement with the out-of-hours team. We hypothesised that this would allow the students to reflect upon the skills required of a junior doctor in advance of their out-of-hours placement, and, by identifying their learning needs prior to the event, plan more effectively for the placement.

Methodology
The ward-based simulation exercise lasts twenty-five minutes, and gives each student an opportunity to simulate the role of an F1; taking handover, prioritising tasks and answering a bleep. This evaluation involves twenty final year medical students based at Newcastle University with three separate data collection points: before the simulation exercise, after the exercise and after the out-of-hours placement. Each student completes an anonymous internet-based questionnaire which compares their perceptions of what can be gained from the out-of-hours placement, before and after the simulation. Having completed the second questionnaire an audio recorded semi-structured interview with a tutor ascertains the most useful aspects of the exercise. Following this each student completes a set of three night shifts shadowing an F1 on call (out-of-hours clinical placement). The final questionnaire is sent to each student after their placement and aims to assess the perceived effect of the simulation exercise on the placement.

Results
A summary of the questionnaire results and analysis of the interviews will be presented.

Discussion and Conclusions
In line with GMC guidance Student Assistantship programmes and shadowing placements have been implemented across the UK’s medical schools to improve students’ preparedness for practice. Despite this newly qualified junior doctors remain underprepared regarding key aspects of their role. The introduction of an appropriate and timely teaching resource can allow students to develop their own insight into the important knowledge and skills they need to address during a clinical placement, and therefore enhance learning and preparedness for practice.

References
‘CIDRectory’ – A directory of community services to facilitate learning in undergraduates regarding the provision of care for long term conditions.

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Background and Purpose
The growing aging population in the UK has resulted in a progressive shift in provision of care from hospital into the wider community, placing increasing demand on our community resources.\(^{(1)}\) Evidence suggests that patients expect their doctors to have an awareness of these resources and provide those essential links; however physicians report a lack of training in accessing these community services.\(^{(1)}\) Traditionally medical students have been hospital based, gaining their clinical experience in acute settings with a high turnover of patients, which is unavoidably weighted towards the biological influences on health.\(^{(2)}\) This setting struggles to demonstrate concepts such as continuity of care, chronic disease management and psychosocial impact of illness.\(^{(2)}\) The development of this tool is designed to enhance students’ involvement in the community, and consequently develop their awareness of community based organisations and deepen their understanding of the management and social impact of long-term conditions.

Methodology
During their third year, medical students at Newcastle University undertake an eight week ‘Chronic Illness, Disability and Rehabilitation’ rotation. To support and expand students’ learning for this module we developed the CIDRectory – a directory of community based services, with which students could spend allocated ‘white time’. These community services included voluntary organisations, self-help groups, specialist nurses and NHS funded schemes. We liaised with key members of these community based services to ultimately develop secure links through which the students could arrange their own learning events. The students at the end of the rotation were required to provide five reflections on how they have spent their ‘white time’. Qualitative methods, such as a questionnaire, will be used to analyse student engagement with the CIDRectory.

Results
The results of the questionnaire will be presented.

Discussion and Conclusions
Initial responses from undergraduates show that they are actively engaging with the CIDRectory, using it to enter the community and explore the services available to patients. This will be discussed in more detail when formal analyses of responses are available.

References:
Practical vs video based teaching of pathology investigations

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Background and Purpose
Within our pathology course we have previously run a session involving students in the practical side of taking an FNA sample for analysis. This was developed as an interesting activity for the students with the hoped benefit of improving their knowledge of the indications and cautions through a deeper understanding of the procedure itself.

This method of kinaesthetic teaching is engaging for the students as they are actively involved and will hopefully promote deeper learning of the procedure allowing the students to extrapolate the results to situations not explicitly covered in the scenario.

We wanted to assess the benefit of this session by comparing it with a session on a similar topic but delivered in a more traditional lecture based format.

Methodology
Two separate sessions were organised for three cohorts of pathology students from Bristol University. One session involved a short powerpoint based lecture on bone marrow biopsies (indications, cautions and results) followed by a video of a bone marrow biopsy being performed as an example. This was used as a comparator group for a subsequent session teaching on Fine Needle Aspirations (FNAs). This session involved a short briefing and discussion around FNAs before a practical activity where students were shown how to take an FNA from pieces of liver or kidney. They were then able to practice this activity themselves and encouraged to take such samples from a simulated lump hidden within chicken breast tissue. They are then able to practice producing slides from the material gathered and receive feedback on the quality of these slides.

Results
These sessions are on-going with feedback collection from three cohorts planned over the remaining university year. The first cohort of feedback showed the students valued both methods equally (average overall impression 4.44 for bone marrow vs 4.33 for FNA sessions) and felt an equal increase in self-reported confidence (4.33 vs 4.00 respectively). The slight differences in the group were not statistically significant.

The feedback will continue to be collected through anonymous questionnaires issued to students after each session using a 5 point Likert scale. There will also be space for free text comments below the more structured questions.

Discussion and conclusions.
Both methods of teaching have merit in teaching different items however with this comparison we will hopefully show a learner preference for one method over another for this specific subject matter.
Using simulation to teach child protection issues to undergraduate students

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Background
Safeguarding of children is the responsibility of all health care professionals in any healthcare setting and it is important to have a basic level of awareness when entering the medical profession. Child safeguarding is a mandatory course in postgraduate medicine and often taught in lecture style. There is some evidence to suggest simulation training is an effective means of teaching child safeguarding issues\(^1\),\(^2\) and has been suggested as a way of practicing skills that are infrequently used\(^3\). However no evidence has been found for the development of child safeguarding teaching in undergraduate medicine. We have designed and delivered a child safeguarding tutorial based on simulation using scenarios that may be encountered at junior doctor level in various hospital based settings.

Methodology
The learning outcomes generated were based on the university curriculum for paediatrics at undergraduate level. Topics covered included non-accidental injury, accidental poisoning and neglect. Focus was on awareness and recognition of safeguarding issues, initial management and subsequent process of investigation. We ran a pilot session for 8 students and collected feedback on their experiences prior to and following the simulation. We will be comparing the responses of students who received a classroom based tutorial to students taking the new simulation session. We will obtain written feedback on the session and take a multiple choice questionnaire testing their knowledge on safeguarding principles and procedures.

Results
Prior to receiving safeguarding teaching via simulation, the eight students that were surveyed rated their experience of receiving teaching in this field as an average of 3.5/5. Following our simulation sessions, all of the students rated their experience as 5/5. This seems to be statistically significant (p= 0.004), with specific advantages of this method of teaching identified as its realism and the ability to address difficult and complex situations in a safe environment. All students would have liked more cases incorporated into their placement.

Discussion
Interactive child protection teaching using real time simulation will encourage students to see the relevance and importance of child protection issues for future practice. The simulation may help students retain information on child protection procedures. We aim to collect further data on using simulated cases to teach safeguarding to undergraduates, but also plan to expand and explore the use of this method of teaching with other healthcare professionals in contact with children, such as paediatric nurses, social workers and health care visitors.

Reference List
Learning to prepare students for managing challenging complex homeless patients.

D Kinnair, L Anderson.
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Background
We report on the changes within our curriculum to prepare students for the challenges of working with marginalised groups (homeless people) who present with bio-psycho-social issues.¹ Curriculum innovation can arise from partnerships between students and faculty.² The ASPIRE excellence awards in Medical Education recognise this, particularly outreach to serve the local community.³

Methodology
This work is underpinned by Participatory Action Learning. Faculty and students work cyclically together within the space created by Special Study Components (SSC). We report here on the outcomes from 128 interprofessional (medical with healthcare students) students who have participated in the project. The learning was endorsed by an earlier cohort and for two consecutive years students have shaped content.⁴ We share the revised course and student perceived and observed learning concerning the reflective placement log books; the reflective essay (2,000 words), OSCE performance on four stations where students assess and manage complex simulated patients; and, the pre- and post-course questionnaire containing scored and open questions. Qualitative data was analysed using thematic analysis and scored questions using SPSS.

Results
There were 85 (66%) full data sets. Themes from the reflective log and essay showed new knowledge, advanced skills and changed behaviours. They wrote about understanding the services for homeless people, and the legal and ethical principles applied to homeless people. They reported having practised skills and professional behaviours for communicating with challenging people, compassion and empathy, managing personal safety, including resilience to deal with challenging situations. Students highly valued novel placements; "I thought the prison placement was very effective in teaching me how to work with challenging people. It really taught me how to be patient and diffuse the situation because when people are able to think clearly the situation can be resolved" student 2013. The OSCE stations revealed how they addressed the bio-psycho-social care needs of homeless people. These were discerning as some students gained much lower scores here than for written reflections. Of the questionnaires, the learning outcome scores were significant (P<0.01); student comments confirmed that this learning had brought together theory, practice and real life interactions within one learning episode.

Discussion
This partnership working is leading to curriculum redesign and students continue to shape content. Many students who complete this learning go onto offer service learning to homeless people to further consolidate these competences.

References
3. International Association of Medical Education. ASPIRE AWARDS. http://www.amee.org/awards-prizes/aspire-award
The Experiences of Medical Students with Dyslexia

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Background and Relevance
Dyslexia is a common condition within the United Kingdom. It effects approximately 10% of the population as a whole and an estimated 1.7% of medical students (1,2). Some research has investigated the experiences of nursing students, but remarkably few studies look at medical students’ experiences. Our main interests lie in documenting the experiences of medical students with dyslexia – due to the unique challenges of studying Medicine within a UK medical school and their career demands. However, our research will be of interest to all colleagues whose work involves supporting students who have dyslexia, and those who have an interest in auto-ethnography and auto-biography.

This paper forms the first part of a programme of research comprising the following:
1. Dyslexia in medical students: a review of the literature.
2. Dyslexia in medical education: an autobiographical case study.
4. The experiences of medical students with dyslexia. We report this phenomenological study here.

Methodology
An Interpretive Phenomenological approach was adopted using unstructured, in-depth interviews. An announcement was put in the Regional Foundation School bulletin to invite foundation doctors with dyslexia, who might be interested in participating, to contact the researchers. Interviews were transcribed verbatim and analysed using a general thematic analysis.

Results
This paper presents the results emerging from the interviews. It aims to present a representation of the themes and issues faced by medical students and the effect that having dyslexia has had on them.

Discussion & Conclusions
This paper will discuss the implications of the findings and allow audience participation in arriving at conclusions.

References
An Investigation into the Use of 3D-Printed Anatomical Models in Anatomy Education

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Background and Purpose
The use of 3D-printed anatomical models in anatomy education is a novel area of research. 3D printing refers to the process by which real, three-dimensional solid objects are created from digital models using a 3D printer. Using this technique, it is possible to create durable, cost effective models of human anatomical structures, on demand, from 3D datasets. Understanding the three-dimensional (3D) nature of the human form is imperative for effective medical practice and the emergence of 3D-printing opens up numerous opportunities to enhance many aspects of medical and healthcare training. The aim of this study is to determine whether three-dimensional anatomical models can be produced solely from high-resolution computed tomography (HRCT) scans of a recently deceased human cadaver and, if so, evaluate their potential for utilisation in anatomy education.

Methodology
A recently deceased, un-embalmed cadaver will be obtained through the London Anatomy Office, and scanned using High-Resolution Computed Tomography scanning at the Clinical Imaging Sciences Centre, University of Sussex. The scan data will undergo structure segmentation and post-processing using computer-aided design software so that 3D-printed models of anatomical structures, pertinent to the Year 1 and 2 anatomy curriculum at Brighton and Sussex Medical School (BSMS), can be produced. A mixed-methods study will be carried out to evaluate the educational value of the models; this will comprise of 1) a quantitative pre/post-test to assess change in learner knowledge following 3D-printed model usage; 2) a student focus group; and 3) a qualitative student questionnaire regarding personal student model usage based upon a longer period of exposure. 1st and 2nd year medical students at BSMS will be invited to participate in this study.

Results
A detailed description of the model-creation process will be presented alongside the results of the mixed-methods study.

Discussion and Conclusions
The results of this study will be used to inform higher education institutions about the processes required to create 3D-printed anatomical models from CT scans. The educational evaluation will offer some of the first evidence about the role 3D-printed anatomical models could have in anatomy education and will enable recommendations to be made about future studies and potential implementations.
Practical clinical handover teaching - the Dundee experience

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Background
Medical handover has been identified as ‘one of the most perilous procedures in medicine’ by the National Patient Safety Agency (NPSA) (1). Inadequate handover can pose risks to patient safety and even contribute to patient harm. Junior doctors are extensively involved in handover, and Good Medical Practice stipulates that doctors should ‘keep colleagues well informed when sharing the care of patients’ (2).

Methods
At the University of Dundee Medical School (UoD-MS), practical experience of handover was not previously part of the formal undergraduate curriculum. We designed, delivered and evaluated handover teaching to 4th year students at UoD-MS, with sessions running from July-September 2014. In groups of 15-20, students attended a 90-minute workshop while undertaking ‘Transition Block’ – an 8-week introductory attachment run prior to commencing clinical placements.

The session was highly interactive and involved practical work with fictional patient notes and participation in mock handover activities. Students had to prioritise and justify their decision-making. Activities to be carried out with the notes included reading previous entries, the use of clinical scoring resources for pneumonia, writing drug prescriptions and requesting investigations. Following completion of the various activities, the students ‘handed back’, with tutors following up each case with a facilitated discussion of the potential risks to patient safety of a poor handover, and how to prioritise allocated patients and tasks.

Results
Feedback at the end of the session showed that participants (n=151) felt more prepared to deliver and accept a handover of care, with 96% and 97% of students respectively rating these parameters 4 or 5 on a 5-point likert scale (1 being strongly disagree and 5 strongly agree). Ninety-one percent of students agreed or strongly agreed that the session ‘increased their understanding of the risks to patient safety associated with a poor handover’; and 89% felt more prepared for this aspect of their role as a junior doctor. Thematic analysis of white space questions confirmed that the importance of handover had been emphasised, along with the significance of effective task prioritisation.

Conclusion
Benefits of this session include better preparation of the students for their role as junior doctors in delivering and accepting handover of care, and equipping them with skills which they can subsequently develop in their clinical attachments. This session required 1-2 members of faculty and was delivered to a year group of over 150 medical undergraduates – students were able to work practically and have a standardised learning experience with low resource input.
Easing the Transition Between ‘Preclinical’ and ‘Clinical’ Medicine; Lessons Learnt in the Hospital Environment.

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Background and purpose
Medical students report high levels of anxiety when entering the clinical environment, particularly relating to staff-interactions. On clinical attachment, they describe themselves as not ‘part of the team’ which they believe is a contributory factor.

Introduced in 2014, ‘Learning in the Hospital Environment’ (LitHE) is a month-long clinical placement for medical students at the University of Bristol. The programme falls at the end of the second year and intends to ease the transition between lecture-based preclinical and hospital-based clinical years.

The recent Francis report highlighted the importance of improving working relationships and building better, more open teams. We used lessons learnt from an intervention undertaken during LitHE that predicated and facilitated personal engagement with various healthcare professionals as the basis of the current study.

Method
Students were randomly divided into two groups. Both Group A and Group B undertook the LitHE placement. Group B also undertook an additional exercise approaching a range of healthcare staff asking them to describe an event that taught them a healthcare lesson they would never forget and for “their one piece of advice” to a medical student entering the hospital environment.

We hypothesised that Group B would perceive an increased sense of preparedness for the clinical environment and reduced transition anxiety. We also expected the exercise to facilitate their integration as healthcare team members. In order to assess this, all participants completed a questionnaire measuring confidence before and after LitHE. At the end of LitHE, a group session enabled Group B to reflect on and share their experiences with Group A.

Results
The results of the questionnaire comparing Group A and Group B will be presented. So too will the ‘free-text’ descriptions of lessons learnt, wisdom gained and advice relayed.

Discussion and Conclusions
The initial results of the pilot (presented at a local meeting) provided entertaining and informative reflections from a wide range of healthcare workers. All vignettes and pieces of advice were enthusiastically given and received. Students in the pilot reported both learning from the responses and forging relationships within the healthcare team.

In a quest to cultivate enthusiasm and aid smooth transition into the clinical environment, this novel initiative represents an exciting educational tool. Before adopting this enhanced and extended approach as a standard practice within LitHE we felt it important to demonstrate its effectiveness in achieving the desired learning objectives.

References
Widening participation to medicine: a medical student led project to assess the barriers and improve accessibility to non-fee paying students

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Introduction
UCAS statistics reveal a trend in higher education towards increased access by women, older age groups and ethnic minorities. However students from lower socio-economic backgrounds are underrepresented at medical school. Only 2% of medical students come from the lowest social class, with 71% coming from the three highest.\textsuperscript{1,2,3} Though this could be attributed to lower average educational attainment, other barriers exist which deter students from applying to, as well as being accepted into medicine. These include a knowledge deficit regarding the application process and a perception of medicine as an “alien culture”.\textsuperscript{2} This study aims to investigate and overcome barriers of students applying for medicine from non fee paying schools, although it is acknowledged this does not necessarily mean they come from lower socio-economic backgrounds.

Methods
Pupils and their parents from non fee paying school in Bristol were invited to a free study morning. Schools were offered a careers talk at which time perceived barriers to medical school application were elicited and used to structure the content for the study morning. Information regarding medical schools, entry requirements and the application process was dispensed. The effectiveness of the morning was evaluated using surveys completed before and after the workshop.

Outcomes
15 students and 6 parents completed both surveys. The workshop increased understanding of the application process in pupils (p < 0.0001) and in parents (qualitative), however the latter remained unsure how to best support their child with this. Other outcomes to be presented include qualitative data regarding barriers to medical school application in students and their parents.

Discussion
There are two overriding issues in the under representation of lower socio-economic classes in medical school. Firstly, fewer students apply from these classes and secondly, there are fewer successful applicants.\textsuperscript{1,4,5} The study day addressed some of the barriers and also improved the chances of being successful by making pupils more aware of the application process. The unique aspect of this course was the inclusion of parents and a key finding was that parents, who are the single biggest influence on career choice, need guidance themselves on how to support their child with their application.

Traditionally widening participation schemes focus on reducing the knowledge deficit. Whilst our workshop appeared to achieve this, it also highlighted that interacting with medical students can help school children to relate with medicine and dispel the myth that medicine is all “book work”\textsuperscript{6}.

References
Slow down! Smartphones, tablets and medical students: are we making assumptions?

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Background and Purpose
In recent years the advance of mobile technology and the devices upon which communication is possible have exploded. Attempts at investigating educational use by students are present in the literature, and several universities now offer mobile devices to students as part of their training. In spite of this however the views of students towards use in clinical contexts are largely unknown. The relevance of this is clear given the high proportion of time spent by medical students in clinical settings and the emphasis on workplace based learning. The aim of this study is to address the attitudes and perceptions of medical students towards smartphone or tablet usage in the clinical environment specifically.

Methodology
Ethical approval was granted from Bristol University. Medical students from year 3 to 5 at Gloucestershire Academy self selected themselves to participate. Attitudes and perceptions towards smartphone and tablet use in the clinical environment were explored via qualititative thematic analysis to saturation point. Four focus groups were conducted in total.

Results
Students were not comfortable with the idea of using smartphones or tablets in the clinical environment. Whilst they would like to use their devices as an aid to learning on ward rounds, in clinic or during history taking they expressed a fear of being perceived by doctors and patients as disinterested or unprofessional. Several students described tablets as more acceptable in this respect, though concerns over negative attitudes from others persisted. The students preferred using hardcopy clinical textbooks on the ward rather than electronic versions, though valued having access to electronic drug formularies. The students reported they would only use such devices in clinical settings if given permission to do so from the doctor or patient.

Discussion and Conclusions
The perceptions of medical students towards smartphone and tablet use in the clinical environment are complex. Though previous studies have demonstrated that medical students own a moderate number of clinical themed smartphone ‘apps’, our results reveal substantial reservations in relation to their use by students in clinical settings. Given that the greatest benefit is potentially gained from use in such clinical contexts especially as more training is spent away from lecture and classroom environments, these reservations require further thought. Doing so would help provide clear guidance highlighting the scope and context of technology use.

References
1Payne et al. 2012. Smartphone and medically related app use among medical students and junior doctors in the UK. BMC Medical Informatics and Decision Making. 12:121
2Davies et al 2012. Mobile Medical Education-how mobile information resources contribute to learning for undergraduate clinical students-a mixed methods study. BMC Med Educ. 12:1
Medical Student Grand Round: A Grand round developed specifically for medical students

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Background and Purpose
Medical grand rounds are a fixture in clinical medicine but they seldom pitched at a level for medical students and student attendance is often poor\(^1\). With an increasing focus by students on the curriculum and exam performance, there is also concern that students miss the wider aspect of medicine. We therefore aimed to identify whether creating a specific grand round for medical students would inspire, enthuse and remind them why they have chosen to enter this vocation.

Methodology
We organised a weekly medical student education rounds to take place on a Wednesday lunchtime during term time. This was designed for consultants or their nominated registrars – to lead a 30-45 minute talk or case presentation on inspiring clinical cases which fall outside of the ordinary curriculum. Topics were varied and included ‘How to dissect a rhino’, ‘Robotics in surgery’, ‘Birds and bergs – 906 days as penguin biologist – working abroad’ and ‘Movement disorders with patient videos’.

Evaluation of the programme was sought using a qualitative questionnaire and the results of these informed changes in the grand round in the subsequent term.

Results
The feedback from students was positive, with consistent emphasis on appreciation for consultant-led teaching and student-centred teaching. Interestingly, there appeared to be wider benefits of the student grand round; creating uniformity to the academy, providing an informal atmosphere to encourage learning and access to consultant role models. Exemplary quotes included:

“it was very relaxed (over lunch) where you could step away from ‘studying’ and enter a realm of ‘learning’.”
“never left without learning at least one new bit of interesting information. I always look forward to these.”
“Enjoyable, worthwhile and appropriately pitched"
“Felt like there was something for us, I think we should receive more teaching from consultants”

The student feedback informed changes to move the grand round from the hospital to the teaching centre, encourage audience participation and the utilisation of clinical cases.

Conclusion and Discussion
Curriculum focused teaching has a potential to limit student exposure to the exciting complexity of patients and wider aspects of clinical medicine. The introduction of a medical student grand round was globally well received and provided unexpected benefits of ‘teaching’ off the curriculum and uniting students from across different years.

References
\(^1\) Hebert, R. S. and Wright, S. M. (2003). Re-examining the value of medical grand rounds. *Academic Medicine, 78*(12), 1248-1252.
Harmonisation to prepare final year medical students for practice: Does what it says on the tin?

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Background
Preparedness for practice is a key aim for undergraduate medical education. The Harmonisation project (part of C21 curriculum review) was introduced to smooth the transition from student to doctor by developing the students’ educational and clinical responsibilities and aligning them with the Foundation program. We report the graduates evaluation of the first year of this program

Methods
Students were embedded (Apprenticeship Perspective Model) within clinical teams across a series of 8-week clinical placements. Continuity of clinical contact aimed to maximise learning opportunities in a safe and supportive learning environment with supplementary simulation sessions in acute care. Formative assessment and feedback based upon Foundation supervised learning events were also adopted. Core themes were delivered in bookended 2-week blocks using Ausubel’s theory of advance organisers to prime the students. These blocks developed the core knowledge and skills required of a Foundation Doctor as defined by the GMC and Foundation program. Emphasis was placed on preparation, science and service improvement. Students were encouraged to demonstrate responsibility for patients under their supervised care. Responses to the Foundation Programme induction survey were used to assess self-reported preparedness for practice.

Results
Around 170 foundation doctors from Cardiff University responded. When questioned, 82% felt adequately prepared for practice making Cardiff graduates an outlier above the 99.9% confidence interval. More than 85% of this group responded positively (agree/strongly agree) for domains concerning identification of their educational supervisor and clinical team, familiarity with practical procedures, equipment, and expectation. There was less confidence in the recognition of critically ill patients (76% agreed/strongly agreed) despite use of simulation and acute care tuition. Cardiff graduates reported 59% and 71% familiarity with and use of the ePortfolio respectively. Overall there was a (statistically) significant improvement in 4 of the 6 domains that were directly attributable to undergraduate preparation with no change in the other 2, compared with graduates from the previous curriculum. Despite these improved scores in the preparedness for practice 27% of these foundation doctors reported pathological anxiety.

Conclusions
Results of this evaluation compare favourably with the work of Goldacre et al. Despite this bespoke programme further work is required to understand anxiety amongst our graduates. In addition despite the provision of acute care experience students felt relatively unprepared for this aspect of care.

An integrated approach to basic and clinical science of the genitourinary system

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Background
A call for greater integration of basic and clinical science in early medical education has produced innovative approaches to curriculum delivery. CBL has been part of medical teaching for decades, however its utility in the provision of learning for the most junior medical students is increasing. Benefits of an integrated approach include, contextual learning, construction of knowledge within a framework and maintaining patient centredness. We describe an integrated approach to sexual health for first year medical students.

Methods
The C21 curriculum in Cardiff developed 17 two-week cases to deliver the necessary learning. This is preceded by a structured introduction to the basic science required to study medicine to prime the students for CBL. Science, practice and professionalism domains direct the learning outcomes and relate back to TD 09. Sexual health is one of the first cases that the students encounter as they can identify closely with this aspect of the human lifecycle. Students are introduced to the “case” by way of a clinical scenario in their small groups and progress through facilitated discussions using the 7-step PBL methodology in 3 sessions over a 2-week period. A series of supported activities are offered to the students to enhance and integrate their learning experience. Four focused lectures are provided each week to address more complex themes. Anatomical, physiological, pathological and clinical science are integrated in a multi-station practical session. Sexual health doctors using trained simulated patients to introduce the concepts of a sexual health history and develop a patient centred approach.

Results
Student evaluation rated this case highly and formal evaluation is forthcoming. Qualitative feedback reported a greater understanding of patient progression through the health service and differential diagnosis. The students have indicated their appreciation of the patient centred approach and view the patient as a whole and not a diagnosis. Students report increased motivation to look for and acquire information.

Conclusions
The lessons learned after 2 iterations include the need for clear separation of the learning outcomes ascribed to small group case discussions and the support sessions. This is vital to maximise student engagement and allows attainment of the outcomes. The provision of sessions that appeal to different learning styles ensure all students have the best possible experience.
Encouraging reflective practice through High-Fidelity Simulation: Death of a simulator.

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Background
Although death and dying are natural events that all doctors will encounter, students receive limited exposure to these aspects of health care practice during their formal education, despite students indicating that they would like more opportunities to learn about dying and death. Simulated death has been described by some as a beneficial learning event which gives learners the opportunity to experience care for a dying patient, see the consequences of their actions, and learn how to communicate difficult news to family members and, discussing their feelings and experiences during the debriefing.

Purpose
To investigate the role of high fidelity simulation in teaching final year medical students about controlled and uncontrolled death, their emotions and encourage reflective practice.

Methodology
5th year medical students from the University of Bristol participated in simulation scenarios during their placement at the Great Western Hospital. Questionnaires were used to obtain feedback from pre and post session and assess any improvement in the confidence levels of students in managing the death of a patient using a 10-point Likert scale and free-text boxes encouraging students to reflect. Students participated in two simulated scenarios in which the patient ultimately died, one in an expected controlled fashion and one in an uncontrolled manner.

Results
Data collection is ongoing, but thus far has brought out some enlightening free text comments and shown an increase in Likert scores on ability to cope with death, mean increase of 2.9 (n=10), and self assessed comfort in dealing with death, mean increase 2.0 (n=10).

Discussion and Conclusions
It is possible to simulate the emotions surrounding death and dying and that simulation can improve the confidence of 5th year medical students in managing patients at the end of life through reflective and compassionate practice.

References
Blood Hound: can tracking a blood sample “journey” improve medical students’ knowledge of the utility of blood investigations

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Background and Purpose
Managing blood samples correctly is identified as a core diagnostic procedure in Tomorrow’s Doctors’. The learning outcomes are aimed at practical considerations such as correct labelling and sample safety. Medical students are also required to learn theoretical considerations of the use of pathological tests. There is often a disconnect between the practical knowledge needed and the student’s knowledge of the utility of a test. This study aims to identify whether tracking a blood sample from the bedside to the laboratory improves this knowledge.

Methodology
Medical students from the University of Bristol undertaking their pathology module followed a “sample journey” for a patient presenting with an acute problem. Students identified patients in the Emergency Department, assisted with venepuncture and blood labelling and tracked the blood sample to the Pathology department. Once results were available the student returned to the bedside and observed the impact of the results on further care. Students were encouraged to engage with all personnel involved in this journey including the patient, treating physician, biomedical scientist and pathologist. Students wrote a reflective account of their observations.

Results
Results from the pilot of this observational study show that students found this process beneficial, not only in consolidating knowledge about practical aspects of blood sampling, but also in gaining insight into the true utility of blood tests in managing patients. Reflection has stimulated students to question the value of investigations. “Why am I asking for this particular test? How will it help in the management of the patient?” Full results will be presented in the context of impact on learning outcomes and the students’ reflective process.

Discussion and Conclusions
The use of blood tests during the investigation of patients has become ubiquitous, to the extent that these are now often referred to as “routine”. By coupling the practical and theoretical considerations of blood sampling we aim to demonstrate that medical students’ knowledge of the utility of these tests can be improved. “This experience brought pathology knowledge into a very clinical and patient centred context and helped strengthen learning and enrich the subject further”.

Bleeping the Medical Student On-Call: Does student confidence correlate with ability when dealing with bleeps?

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Background and Purpose
Medical students encounter many difficulties when adjusting to the role of a Junior Doctor. The General Medical Council has stated that one in ten students feels inadequately prepared and that there are further areas for concern around resilience in the clinical environment, mixed communication and team working abilities and mixed evidence on professionalism. Many modern medical courses are being redesigned to lessen this impact. The purpose of this study is to investigate the gap between confidence and ability with regard to telephone communication amongst final year students in the months prior to qualification.

Method
Ethical approval was sought and granted from the University of Bristol. Trust R&D ethics approval was sought but deemed unnecessary. Notes from junior doctor focus groups were used to identify common areas of difficulty surrounding on call telephone encounters. Eight scenarios were developed using this information.

Final year Medical Students on their final Junior Doctor shadowing placement were then given a bleep for one morning and instructions to answer it with the premise that they are tied up with an unwell patient and must attempt to deal with the requests over the telephone. A Clinical Teaching Fellow then bleeped them and acted through the scenarios.

Scenarios were designed to be simple and to test students’ ability to triage severity of situations over the telephone, request initiation of basic interventions and investigations such as analgesia or fluids and recognise when urgent help may need to be summoned to the mock patient in question. Pre and post intervention questionnaires assessed confidence on a Likert scale. Results from these will be compared to actual performance in the telephone scenarios as rated by a mark scheme validated by existing Junior Doctors.

Results
Preliminary results display that students’ self-rated confidence rarely matches ability. Further data will be collected and results will be presented describing this relationship further.

Discussion and Conclusions
Many studies assess confidence of students with regard to their preparedness for practice. Not all of these studies assess competence as well. The comparison of these data allow for assessment of a student’s ‘Johari Window.’ Often the concern for patient safety amongst Junior Doctors comes not from a student’s known unknowns but their unknown unknowns. This study attempts to assess the extent of this in a small but important area of student performance.

Through the looking glass: Can peer led simulation based teaching sessions run by medical students improve their own learning?

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Background and Purpose
Simulation based medical education has existed for many years and has become an integral part of clinical learning\(^1\). Issues such as patient safety and changes in working patterns have led to the decline of apprenticeship-style training and the emergence of teaching and training on manikins \(^2\). There is good evidence that individually supports both the benefits of peer assessment\(^3\) as a teaching method and that medical students find simulation based teaching an effective way to learn\(^4\). However, few studies look at students in the role of the simulation teacher and whether adopting this role is a valuable method of student learning. The aim of this study is to investigate whether peer led simulation based training is a valuable learning tool for the students who are in the teaching role. Initial pilot study data showed that 92\% of students felt that running the simulation scenario helped them reinforce their own knowledge.

Methods
Forty University of Bristol medical students studying at Gloucestershire Academy were invited to attend small group simulation sessions. The students were initially taught how simulation based teaching works and how to operate the manikin from the adjacent control booth, which was situated behind a one-way glass. The students were divided into two groups of three and with facilitation, one group was asked to run a simulation scenario for the ‘control group’. Within the booth, the students played the role of the patient via a microphone and speaker system, whilst operating the vital signs throughout the scenario. They were instructed to think about the patient’s physiology and respond to any treatment given. The ‘control group’ was asked to assess and manage the patient. Following the conclusion of the scenario, the students were given a 6-point scale questionnaire. Results were compared between the two groups of students, to establish whether running a scenario for other students helped improve knowledge of the topic covered compared to the ‘control group’ in the scenario. Following the questionnaire, the students were debriefed, and the topic covered was discussed in further detail, before the groups switched roles.

Results
The full results will be presented and discussed at the ASME conference 2015.

Conclusion
Simulation based teaching has been used as an effective medium for teaching\(^4\). Encouraging medical students to take an active role in teaching their peers in simulation based education can lead to a better or reinforced understanding of curriculum topics.

References
A Novel Approach to Teaching Referral Skills

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Background & Purpose
There is evidence that foundation doctors often feel underprepared\(^1\) and find the transition from student to FY1 stressful\(^2\). Clinical supervisors feel that new doctors do not always seek assistance appropriately\(^1\) with subsequent patient safety implications. Although making referrals is a frequent occurrence, little research is available. Evidence from Emergency Medicine showed all doctors (across the grades) had encountered some issues with referrals, whilst 56\% affirmed it as difficult\(^3\). Anecdotally, students describe minimal training in this area.

We propose implementing a teaching programme on referral skills for final year undergraduate students to develop knowledge and confidence through simulated practice, with the aim of improving overall competence.

Methods
We identified core components of a competent referral through guidelines and focus groups with senior medical registrars. From this information we developed referral proformas and checklists to lead standardised workshops. The programme involves two 1-hour small-group sessions. Session One comprises face-to-face referrals of simulated patients and didactic teaching on key components of good referrals with recorded examples. Homework is a written referral. Session Two simulates a "real-life" telephone referral: seeking appropriate assistance from an "on-call medical registrar" (an unseen ST1+ grade tutor). The students and tutors re-convene to offer individualised feedback, followed by group discussion and take-home messages. We are currently piloting this programme and will deliver this session to all fifth year University of Edinburgh students in their assistantship in March 2015 and across South East Scotland as part of the PULSE project.

Results:
Both quantitative and qualitative data will be presented. Initial results show that this novel workshop has been well received: students find it enjoyable and would recommend it to their peers; their feelings of confidence and preparedness show clear improvement. Tutors noted clearer structure with purposeful direct questioning, coupled with better prioritisation of relevant clinical information.

Conclusion:
Initial results suggest objective and subjective improvement of referral skills of final year medical students through the introduction of our Referral teaching programme. This novel approach, with a practical and transferrable methodology is being expanded across the South East Scotland region. We hope that similar tutorials can be adopted in other regions, with the shared aim of improving preparedness of new doctors as they transition from undergraduates.

References:
Does accurate surface anatomy body painting increase student’s confidence in accurate clinical examinations? An innovative teaching technique.

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Background and Purpose
Clinical examinations are a crucial skill to develop as a medical student but they can be in danger of being a choreographed routine rather than a diagnostic skill. Surface anatomy painting has been established as a fun and useful tool for teaching clinical anatomy, however no research appears to have looked at the use of anatomical body painting for teaching clinical examinations. An innovative teaching session was developed to use body art to demonstrate surface anatomy, with the aim of visually highlighting the importance of an accurate clinical examinations of the respiratory and cardiovascular systems.

Methodology
Four teaching sessions were delivered to fifty second year medical students at the University of Bristol during May and June 2014. The students initially examined each other, marking with paint where they placed their stethoscope for cardiac and respiratory examinations. They then accurately marked out and painted the surface markings of the lungs, liver and heart on the thoraces of their consenting peers. This enabled students to visually compare the difference in initial examination points to the correct surface anatomy. They then spent time performing separate cardiovascular and respiratory examinations on their painted peers, ensuring anatomically precise percussion and auscultation.

A qualitative questionnaire was used before and after the session to evaluate the students’ knowledge, confidence and enjoyment of the clinical examination session.

Results
The results from the questionnaire along with images of the session will be presented. All students completed the questionnaire and the feedback was unanimously positive, with comments such as ‘I didn’t realise the lungs were so big posteriorly’ and ‘now I understand that dullness on percussion can represent the heart or liver’. There was improvement in the mean confidence of students in their clinical examination skills and surface anatomy knowledge in all four teaching groups.

Discussion and Conclusions
The use of body art in medical education appears to be a fun and highly memorable tool for learning and may be a powerful adjunct to conventional teaching methods. It would be interesting to further evaluate whether the session has a long term impact on students examination techniques.

The Experience of Medical students Classified as Excellent in Professional Examinations (EMCEPE) study

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Background

Elite athletes are able to demonstrate excellent performance, and do so repeatedly, as a product of common behaviours displayed in environments which demand high performance (1, 4). Effective self-regulation is associated with high-performance in sport but now there is increasing recognition about the importance of self regulated learning (SRL) in education (3, 5, 6).

This study explores the behaviours of high-performing (HP) medical students; whether SRL behaviours are described in mediating high attainment and performance in the medical school environment, both in daily learning activities as well as at assessment. The specific research question for this study was; What influence does SRL have in the approach to individual and group learning as well as around the task of assessment (before, during and after) in HP students at medical school?

Methods

All students from a cohort of 4th year MBChB students who achieved an excellent (or distinction) classification in any high-stakes assessment, were identified from academic performance data. Any student who also attained an unsatisfactory (or failing) in any examination was excluded. Any remaining student was invited participate in semi-structured interviews describing their experience of learning and assessments on the course. A qualitative thematic analysis of the data is ongoing.

Results

113 out of 211 students met inclusion criteria, of whom 36 expressed interest and 14 have been interviewed so far. Emergent themes include creating or migrating towards an environment conducive to learning; following a strict learning routine; developing a strong relationship with a clinical partner. A complete organisation of themes will be available by the time of the conference.

Conclusion

HP medical students may be similar to HP athletes in their preparation for high stakes events such as assessment. These findings contrast the behaviours of low performing students (2) with implications for how medical schools develop learning skills in course. Further research could explore SRL in workplace and across the interprofessional spectrum.

References

Medical law for medical students: Including law in the ethics curriculum in Dundee Medical School

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Purpose
In the UK, medical ethics teaching is mandated by the GMC, and is included in every medical school curriculum. However, in day-to-day practice, doctors and medical students are governed by criminal law, civil law, and a more flexible but no less important form of law in the form of regulations, guidance, policies and procedures. Within the curriculum at Dundee Medical School we are including sessions on law as part of ethics theme teaching, taught by a law lecturer attached to the School. During the presentation we will describe the content as well as format of the law sessions, including student feedback.

Product
Until now, law teaching has been inserted into the medical school syllabus in an organic fashion. The feedback from students has been extremely positive, with comments suggesting there is a perception that law is more certain than ethics, since there can be a “right” answer. This clearly appeals to the typical practically-minded person who wishes to enter the profession of medicine. The utility of including law has been recognised by the Dean of Dundee Medical School by granting the title of Teaching Associate in Medical Law and Ethics to an academic lawyer. Currently, a more integrated approach to the subject is being mapped out such that the related topics of medical law and medical ethics are taught harmoniously. It is hoped to have a revision e-module on medical law completed by the end of 2015, with the input of students who guide and evaluate the process.

Practical Application
Medical ethics is often regarded as a “soft” topic with little practical application in everyday practice. Presenting law in the form of applied ethics allows an exploration on how ethical decisions inform medical practice. In addition, informing future doctors of the potential penalties of infractions of the three types of law will hopefully produce doctors with a better understanding of the importance of local and national guidance.
A pilot study investigating the effect of dialogic feedback and self-regulation on surgical task performance

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Background and Purpose
Feedback and its importance to surgical training is well established. Recent research proposes development beyond tutor-learner information transfer to the creation of exploratory tutor-learner dialogue. Theory suggests that strategic engagement of the learner during task completion, the process of self-regulation, is linked with improved task performance. This pilot study was undertaken in the early stages of an MD project investigating the effect of an integrated model of dialogic feedback with self-regulation promotion on surgical skill development.

Methodology
Thirteen medical students were randomised into Groups A (information transmission) and B (dialogic feedback). Participants completed two study visits 1 week apart. Visit one involved: task practice and three repeated performances (P1-3) of a simulated laparoscopic task (LapSim©; vessel ligation). Visit two involved: two further task repetitions (P4&5). Outcome performance measures were: time to task completion (TTC in seconds) and economy of movement via combined instrument path length (CIPL in metres). Tutor-participant feedback followed each task performance. Technical content and total feedback time was standardised between groups.

Results
Group B mean TTC decreased sequentially in visit 1 (P1:292; P2:191; P3:134). This pattern was not observed in Group A (P1: 227; P2: 258; P3: 223) (p=0.165). The inter-group difference in mean TTC in P4 was close to statistical significance (A=270; B=103; p=0.099). All participants in Group B improved TTC in P4 in comparison to P1; mean improvement was 189 seconds. Group A showed variation in delayed performance; mean P4 TTC was 44 seconds slower compared to Group A P1 (p=0.0822). No inter-group difference was observed in mean P1 CIPL (p=0.570). However, the difference seen in delayed testing approached significance (mean P4 CIPL; A=7.44 vs B=2.37; p=0.0788). Delayed performance was significantly more consistent throughout Group B compared to Group A, both in TTC (p<0.01) and CIPL (p<0.01).

Discussion and Conclusion
This pilot study reveals a potential and previously undemonstrated link between dialogic feedback with self-regulation and improved surgical skill acquisition. Furthermore, learners exposed to this model displayed greater skill retention. Statistical analysis is hindered by the small numbers in each group but these provisional results support further research in this area.

References
A mixed method investigation of the response of undergraduate medical students to a Peer Assisted Learning Scheme (PALS) at the University of Aberdeen

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Background
Peer assisted learning schemes (PALS) promote adult learning in an interactive and safe environment, which is cost-effective and sustainable.\(^1\) PALS addresses teaching competencies specified in the GMC (UK)'s “Tomorrow’s Doctors”.\(^2\) We report a study, using quantitative survey and qualitative methods; of medical students’ perceptions of peer assisted learning in undergraduate Medicine at Aberdeen University.

Methodology
PALS was conducted over an academic year in MBChB programme. Fifth year students applied as PALS-tutors and attended staff-led Training the Trainer workshop. Attendance to PALS-tutorials by Year 3 students was voluntary. A survey of students’ opinion of peer learning & teaching was completed before and after each tutorial, asking students to rank agreement with statements using a Likert scale (1 to 5: 5 = strongly agree). Responses were compared and statistically analysed (IBM-SPSS-Statistics22). Students were invited to focus groups, centred on semi-structured interviews, aiming to explore how students perceived peer assisted learning and asking if students thought PALS should be an integral part of their learning. Permission to record and use data was given and data anonymised in accord with ethical requirements. Qualitative evaluation was carried out by an independent assessor using grounded theory to establish emerging themes.

Results
52 Year 3 students attended PALS-tutorials, 80% of whom had not previously attended institutional peer-led tutorials. Students expressed positive attitudes to PALS, 80% agreeing, pre-tutorial, peer-led teaching is a useful learning tool. Significantly, Year 3 students found peer-led more engaging than staff-led teaching, post-tutorial, and agreed there are better opportunities to ask questions in PALS. Most students agreed peer-led teaching is beneficial for the student who teaches, and agreed it is beneficial for the student who is taught. Post-tutorial, most agreed peer-based learning was a better experience than lectures, and significantly (<0.001), most agreed peer-based learning should be included in the undergraduate programme; pre:4 median (3-4 interquartile range) and post-tutorial:4 (4-5). A total of 17 students attended two focus groups, highlighting key drivers to student motivation in attending PALS, including: succeeding in exams, shared student experience and collaborative social learning. Interestingly, students reported benefits with regard to elements of the “hidden curriculum” (eg. Professionalism, positive role modelling)

Discussion and Conclusions
Students found PALS useful and agreed more peer-led teaching should be introduced into the programme. Student motivation to learning appeared driven by success in formal assessment. A key factor to student engagement related to common experiences between peers. Medical Schools may wish to consider PALS as a positive adjunct to traditional institutional teaching methods.

References
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A comparative quantitative analysis of student perceptions of peer-led learning as a formal versus extracurricular learning method in undergraduate medicine

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Background & Aims
Peer assisted learning (PALS) at the University of Aberdeen is an extracurricular student-led initiative. Student feedback has been positive, suggesting PALS is included formally in the MBChB curriculum. We piloted PALS as programmed time, in addition to existing staff-led tutorials. We compared students’ perceptions before and after experiencing PALS as formal and extracurricular elements in undergraduate Medicine.

Methods
Fifth year students were asked to undertake a “Training the Teacher” induction. Anatomy teaching was delivered by staff supported by student tutors. Student learners could optionally decide to approach student tutors. Students were invited to attend optional extracurricular PALS tutorials. Year 3 students’ opinions of peer teaching and were surveyed using Likert scales (1 to 5: 5 = strongly agree) before and after the sessions. Responses were compared and statistically analysed using IBM-SPSS-Statistics22 (significant, p≤0.05). The project was approved by relevant ethical authorities.

Results
Overall, 274 surveys were completed: 186 students pre-tutorial, 60 post-formal teaching, 28 post-extracurricular PALS. The majority of students had not previously experienced PALS. Students were positive about peer-teaching, 80% agreeing pre-tutorial that peer-led teaching is a useful learning tool compared to 97% post-formal and extracurricular tutorials. Post-formal and extracurricular tutorials, 68% agreed peer-led is more engaging than staff-led teaching. Pre-tutorial, 50% of students agreed there were better opportunities to ask questions compared to 60% post-formal and extracurricular tutorials. Perception of quality assurance of peer tutoring remained unchanged; 25% of students agreed they were afraid the student tutor would be unable to answer their questions accurately. Most students agreed PALS is beneficial for the student who teaches and for the student who is taught, 92% and 96%, respectively. When asked if students agreed PALS is a relaxing way to learn opinion changed positively from 63% pre-tutorial to 87% post-formal and 89% post-extracurricular tutorial. Students agreed post-tutorials that peer-based learning should be incorporated into the undergraduate curriculum; 67% pre-tutorials, 83%, 4 median (3-4 interquartile range) post-formal, and 86%, 4(3-4) post-extracurricular PALS.

Conclusions
Students value peer-led teaching. Student perception was similarly positive towards including PALS in the curriculum. Students were supportive of PALS as an optional programmed resource and as an extracurricular activity. Some student concerns over quality assurance of peer tutoring exist but, overall, students agreed PALS is a useful learning tool.

Key message
Medical schools might like to consider developing PALS as a positive contribution to institutional teaching methods as an optional resource within the formal curriculum.
Surviving the Wards: A Teaching Module covering Essential Medical On-call Skills

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Background
The transition from final year medical students to foundation doctors can be very challenging with many new doctors reporting that they feel underprepared\(^1\,^2\); clinical scenarios encountered by new foundation doctors during their first weeks can seem daunting. Much of the current training focusses on the acute medical and surgical emergencies\(^1\,^2\), whilst the management of other basic ward problems are often overlooked. The aim of our teaching module was to equip medical students with the knowledge to manage common everyday yet important tasks that are encountered. These tasks may appear simple; however their assessments are often complex and important clinical signs and investigations may be overlooked. We provided a stepwise approach to management for medical students preparing to transition to foundation doctors, with a focus on thorough clinical assessment, good record keeping and communication with staff, patients and relatives.

Methodology
Teaching was delivered in small group sessions in the form of didactic tutorials, made interactive by using case based learning scenarios, followed by group discussion. Each session lasted one hour; five tutorials were delivered during the 8-week general medicine block for final year medical students. Role play exercises were frequently used during these sessions focussing on communication skills.

The following topics were covered:
- Assessing a patient who has fallen
- Assessing a patient with pyrexia
- Warfarin prescription
- ECG interpretation
- Assessing a patient for IV fluids prescription
- Prescribing symptomatic relief for nausea, bowel management and end-of-life care

Results
The discussed module has consistently received positive feedback, with students reporting the material as clinically useful – improving not only their knowledge, but also their confidence in these common clinical practices. A summary of feedback for these sessions received from students will be presented.

Conclusion and Discussion
There is increasing focus on preparing medical students for their role as doctors, and recommendations for all final year students to undertake an assistantship – shadowing Foundation Year One doctors to learn their everyday tasks. This module serves as a useful addition of formalised teaching to more informal practical ward experience, ensuring standards of practice are maintained and management guidelines followed. We suggest that empowering new doctors with confidence in their everyday clinical tasks, supports their development in more advanced clinical practice.

References:
A thematic analysis of student experiences about deteriorating mental health and the priority they give it at medical school

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Background
Medical students are at high risk of experiencing psychological distress at University and developing mental health conditions in future professional practice. Medical students with mental distress or mental health problems can also suffer in silence, with some choosing not to seek help, despite the severity of their symptoms. This study is part of a wider ongoing programme of work around underperformance at medical school, specifically focused on exploring drivers for students to choose alternatives to help seeking and the barriers that prevent students from prioritising their health or well-being when necessary.

Methods
Medical students entered into a remediation programme after failing their final professional examination at Leicester and Nottingham Medical School across a 7-year period were invited to share their experiences of getting in difficulty. The interviews explored progression on the course, focusing specifically on key events, such as high-stakes assessments or failing events. All interviews were transcribed verbatim and a thematic analysis was undertaken to identify key factors around episodes of mental distress that influenced decisions around help-seeking or choosing alternative courses of action.

Results
20 out of 58 interviews with students in remediation across two medical schools revealed evidence of mental distress or mental health problems. Barriers to help seeking included normalisation of symptoms or situation; failure to recognise a problem existed; fear of stigmatisation; overt symptoms of mental distress; and misconceptions about the true nature of the medical school. Some students did recognise their mental health problems and found help. Other drivers included the ability to confide in someone and a recognition that mental well-being was important.

Discussion
Medical students face a dilemma of prioritising completion of the course over looking after their health and well-being. This study confirms that some students consciously prioritise completion of their studies as a means of ignoring or denying the existence of mental health problems. The implications for medical educators are significant given that we found evidence that students failed to recognise the signs of mental health problems despite being trained to recognise such problems in others. Medical schools need to develop better methods for tackling poor recognition of mental health issues in students so those most in need support can access the relevant services.

References
Maximising success: Facilitating the academic, professional, social and emotional transition of students into medical school and through year 1.

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D Hubble, Clinical Senior Lecturer, Department of Medical Education, Norwich Medical School, University of East Anglia, Norwich NR4 7TJ, UK.

Background and purpose
Successful transition into and through medical school is a well-recognised challenge. Emotional vulnerability, maladaptive coping strategies and low resilience are inter-related and associated with physical and psychiatric morbidity. Promoting student well-being through targeted support- academic, pastoral and organisational- seems likely to improve students’ overall experience, their academic success and their enjoyment of medical school.

Methods
We have many points of intervention to lever students towards better academic, professional and general coping practices. At the admissions stage, careful counselling at engagement events, and selecting students who are suited to the course are all essential to avoid mismatches in school/student styles, as unsuitability to the profession is a common reason for attrition. Further activities during students’ post-offer time, when they are completing their school studies and deciding which medical school to choose, is a valuable time to offer students further insights into the course; the next component when offers are finalised is yet another opportunity.

On commencing the course, the quality of the induction package, the nature of their welcome to the University, the presence and attitudes of staff are an important element towards settling in students. Peer mentoring and good administrative support to navigate the logistics and idiosyncrasies of new systems and curricula, add to students’ self-confidence and provide good role-modelling. Personal advisers receive specific year one guidance and meet the students in week 1 at a social event.

The social and collaborative element of learning in small groups supported by dedicated tutors helps strengthen psychological and academic well-being, as well as providing an early-warning system. The initial course content is engaging and planned to mesh with students’ current experiences and knowledge. Formative assessments are followed by personal feedback and foster a culture of self-reflection.

Results
This is work-in-progress and is being evaluated qualitatively together with the rest of the course. We are exploring and evaluating “induction” as something above and beyond just the induction week and evaluating the different strategies we have put in place.

Conclusion
Our awareness of the importance of acknowledging the importance of managing these transitions has become more acute as the average age at entry has diminished, as we receive more school-leavers and fewer graduates. In the last three years we have focused on developing these interventions at Norwich Medical School while sharing ideas across faculties in the wider University, to work towards a more global culture of support.

The experiences and attitudes of medical students and educators involved in large group teaching at a UK medical school

C Luscombe, J Montgomery, J M Price

C Luscombe, Intercalating Medical Student (iMSc Medical Education), Brighton and Sussex Medical School, Brighton, United Kingdom.

Background and Purpose

The learning and teaching strategy of Brighton and Sussex Medical School (BSMS) outlines how curriculum delivery should be planned and implemented (1). There is a focus on improving the curriculum to become more student-centred, interactive and enhanced by developments in digital and e-learning. Discussions have also begun about how the implementation of concepts such as the ‘flipped classroom’ (FC) (2) and ‘audience response systems’ (3) might benefit the traditional large group teaching environment.

This study aims to explore student and educator experiences of current teaching methods employed within this environment, as well as exploring the perceived value of new teaching methods, including barriers and challenges to their implementation. In particular we wanted to know how current student experience and value ‘the traditional lecture’ in the course of their learning at medical school.

Methodology

Our research employed a hermeneutic phenomenological approach, within a case study design. A single second year teaching module was identified as a suitable case within the BSMS curriculum, since it had already incorporated a variety of teaching methods and modalities. One approach – the “flipped classroom” (FC) was highlighted as a prima-facie example of novel pedagogical practice, and explored in some detail.

Using qualitative research methods (student focus groups and semi-structured interviews for educators), experiences of both learners and teachers have been explored. Using generic thematic abstracted data analysis, these accounts have been developed into a meaningful account of experience, which describes potential approaches for supporting student learning in the lecture environment. This information may be transferrable to other modules within the BSMS curriculum and more widely nationally.

Discussion

There is conflicting evidence as to whether novel approaches to replace traditional lectures, such as the FC, will improve student academic results, particularly in a medical school environment, and also whether students prefer novel methods such as the FC to enhance their learning (4,5). It is evident that much recent research in the FC area has focused on small group, as opposed to large group, teaching. Moreover little research has been carried out on medical students. Our research grounds the inquiry in current pedagogical practice, and demonstrates both the potential advantages, as well as the considerable challenges to implementation of novel pedagogical practices in large group teaching in medical schools.

Results

Results from the literature review will be presented, as well as emerging themes and other findings from focus groups, interviews and questionnaires. We will present a constructive review of the ‘pros and cons’ of new approaches to the traditional lecture, and recommend issues for both faculty and students to consider in their future engagement with the concept of ‘large group learning’ in 21st Century medical schools.

References

Undergraduate Learning Needs in Pathology: A focus group study of F1 opinion and comparison with the national curriculum

JM Fox, AL Knott, NR Cohen
JM Fox, Faculty of Medicine and Dentistry, University of Bristol

Background
As more medical schools are integrating their curricula, there is a perceived danger that the teaching of Pathology (including Microbiology, Chemical Pathology and Haematology as well as Cellular Pathology) will be side-lined as it is subsumed into systems and problems based teaching. Foundation doctors are some of the most heavy users of the Pathology laboratory, both in their requests for tests and their interpretation of the results obtained, yet they do not always feel competent to do this. The Royal College of Pathologists have recently developed a new curriculum for undergraduate Pathology designed to address the learning needs of Foundation doctors. The purpose of this project is to investigate the Pathology learning experience of these doctors whilst they were at medical school, and map their perceived learning needs to the new course currently being developed at Bristol University. We will also explore which methods of Pathology teaching they have enjoyed over their pathology attachments and which they felt have been the most useful learning tools.

Methodology
Focus groups of 4-6 junior doctors (Foundation Years 1 and 2) were run. Participants were recruited from hospitals attached to Bristol University, and were not limited to Bristol University graduates, so as to present a variety of pathology courses to discuss. Opinions were sought on their training in Pathology: what they enjoyed, what they felt to be ineffective, and whether there were any learning gaps in their Pathology training.

Results
The results of the focus group discussions, including common themes identified, will be presented along with the action points resulting from the synthesis of the results.

Discussion and conclusion
The results of the focus groups will be used to inform the methodologies used in the new course, and also to ensure that the content of the course is useful for the newly qualified doctors.

References
The use of simulated MDT meetings in Undergraduate Pathology Teaching

JM Fox
JM Fox Faculty of Medicine and Dentistry, University of Bristol

Background
MDT (multidisciplinary team) meetings are an integral part of clinical practice, with pathologists playing an important part of the process. MDT meetings themselves are an excellent educational resource for medical students, but the pressure of time upon the clinicians involved may mean that they are unable to teach the students during the meetings, resulting in the students having a suboptimal educational experience\(^1\). Simulation is a widely used tool in Medical Education\(^3\), and has been used to provide students with experience of MDT meetings\(^4\). As part of a new Pathology course, we wish to give students the experience of an MDT meeting from the point of view of the Pathologists, and so have devised a format whereby students on the Pathology course play the parts of different pathologists in an MDT meeting facilitated by a qualified doctor (a teaching fellow or a consultant). This format will be piloted prior to the introduction of the new curriculum and the views of the participating medical students sought.

Method
The participants in the MDTs will be assigned to represent different Pathology specialties. They will be given pathology data relevant to their assigned role on a fictitious patient, and clinical information equivalent to that which would be provided on a request card. They will be given the information several days before the session, so that they can research the area if appropriate. The facilitator of the session will be given all of the information that the various students have been provided with, along with further data and radiology images where appropriate.

After the sessions, the facilitators and the students will be asked to provide feedback, with a questionnaire and a group discussion.

Results
The results of the feedback from both students and facilitators will be provided, along with plans for the implementation of the format in the new Pathology course.

References
Optimism and grit: Key to success in the widening access student’s journey into medical school

JA Cleland, M Mehdi
JA Cleland, Division of Medical and Dental Education, University of Aberdeen, Polwarth Building, Forsterhill
AB25 2ZD

Introduction
Across the world, young people with the academic and personal attributes to successfully study medicine and be doctors face disadvantages associated with demographic factors such as ethnicity, minority group membership and/or low income. Previous studies in this area have focused on barriers to successful application to medical school, such as cultural and social norms, lack of social or parental support and/or lack of attainment. In contrast, we were interested in the experiences of “non-traditional” applicants who succeeded in obtaining a medical school place, to explore the complex, intersecting individual, social and cultural factors which contributed to their achievement.

Methods
Grounded in social constructionism, 14 semi-structured interviews were conducted with medical students from three UK medical schools, who self-identified as being from widening access backgrounds and responded to emails about the study from the research team. Narrative interviewing techniques were employed to capture their lived experiences of getting in to medical school.

Results
Data coding and analysis were initially inductive, using framework analysis. After the themes emerged and after considering many possible interpretative frameworks, we applied the conceptual lens of positive psychology (Seligman, 2000) to the data. Psychological resilience was a common trait in our participants, who bounced back from (the many) challenges in their journeys by using positive emotions such as perseverance, motivation, determination and goal setting to cope. Emotional support from family played a crucial part in this resilience, counterbalancing poor support and discouragement from teachers. While contextual, relational and material factors affected how the journey into medical school played out in facilitative and inhibitive ways, the individual factors of grit and optimism seemed key to success: “I’ve had people tell me that I can’t do this, I can’t do that because I come from so-and-so. But the thing is, I never listen to any of that crap, I move forward, it’s about perseverance”.

Conclusion
This work gives a unique insight into the journey to medical school of “non-traditional” applicants. Our findings are important given the importance of non-cognitive factors in attainment generally, and the importance of resilience in terms of clinician well-being and support. We suggest that widening access may bring specific gains to the medical profession, challenging the dominant discourse of meritocracy within the widening access literature (Trowler, 2008). Further research is required to explore if this is indeed the case.

References
A national undergraduate child health curriculum: what are the core components?

HC Jacob, CR Fertleman
HC Jacob, Institute of Child Health, University College London, 30 Guilford Street, London WC1N 1EH

Background
There is a pressing need to improve health outcomes for our nation’s children and young people. This, together with the considerable variation in child health teaching across UK medical schools, has led to increasing support for a national undergraduate curriculum for child health. This study aimed to establish clinicians’ views on what the core components of an undergraduate child health curriculum should be.

Methods
This study comprised three rounds. During Round 1, a range of clinicians involved in child health were asked what should be included in the child health curriculum. They included paediatricians, general practitioners, paediatric and general practice trainees, specialist nurses and medical students. All suggestions were treated equally and collated into a single list of key knowledge, skills and attitudes. In Round 2, participants ranked each of the suggestions using a Likert scale (1-5). The mean, median and interquartile range for each item was calculated. In Round 3, these pooled results were shared with participants, who were then invited to re-rank the items, using the Delphi methodology.

Results
80 people contributed to Round 1 within the allocated timeframe. Every UK medical school was represented. 56/80 (70%) participants voted on the collated suggestions in Round 2. 48/56 (86%) voted again for Round 3. Items scoring highly (mean >4) included knowledge of normal development and growth, recognition and initial management of the sick child and prescribing. Knowledge of global health outcomes and NHS structures for child health had a mean of <3. There was a wide range of opinions about whether the curriculum should include more generic items with relevance to child health such as performing a literature search to answer a clinical question and quality improvement.

Discussion & Conclusions
This study identifies core knowledge, skills and attitudes in child health deemed essential for all medical students. These components will form the basis for the national undergraduate curriculum in child health. The items were generated by a wide range of clinicians, academics and students and involved all UK medical schools, helping to maximise the curriculum’s utility.
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Breaking down the Barriers - Improving communication on a simulated ward round

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**Postgraduate Education**

Foundation QI Education- Developing a web of expertise

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Does our training scheme meet the needs of trainees – the trainee perspective?

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Factors influencing choice of foundation school – Location, location, location

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Are there indicators associated with trainee doctors who have experienced difficulties in their postgraduate medical training? A systematic review of the literature

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Escalation of Care and Do Not Attempt Resuscitation Decisions: The Role of the Junior Doctor
Basic Science / Biomedical
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The patient’s story: Teaching undergraduate medical students the art of oral case presentation

L Whitton, P Fletcher, CD Rodd
L Whitton, Clinical Teaching Fellow, Gloucestershire Academy, Gloucestershire Royal Hospital, Great Western Road, Gloucester, GL1 3NN.

Ethical approval was not required for this study.

Introduction and Purpose
The oral case presentation and ability to relay a ‘patient’s story,’ is an essential skill for all doctors. In the words of Myron Falchuk, “…Once you remove yourself from the patient’s story, you no longer are truly a doctor.”

Although medical students receive teaching on patient communication skills, teaching on physician-to-physician communication is limited. Yet, it is this that may fuel patient care, improve effectiveness of ward rounds, inspire group discussion and learning and act as a vehicle for collaborative conduct.

Medical students typically lack logical order in their presentations and include extraneous detail. The student presentation was described by Haber and Lingard as a rigid, rule-based storage activity ... [and typically use] the same organisational format as their written records.

Despite the clear importance of presentation skills in medical students, there is no universally accepted tool to help master such skills. A novel approach to teach medical students presentation skills is explored in this study to improve their abilities to synthesise relevant details, employ their medical knowledge whilst preserving the ‘patient story.’

Method
19 third year medical students from the University of Bristol at Gloucestershire Academy were study participants. Students completed a questionnaire at week five of their placement. The questionnaire asked students to rate their confidence in presentation skills and was based upon the Likert rating scale.

In small groups, students were each given a “mock clerking” and tasked to prepare a case presentation from the clerking in the style of a ward round presentation. Students were advised that marks would be awarded for inclusion of important details and deducted for inclusion of irrelevant details. Each clerking contained clear features that needed to be included, implanted in superfluous details.

Student presentations were then peer assessed using a pre-determined marking tool. Scores, feedback and discussion followed each presentation.

Following the session, students completed the same questionnaire and an evaluation form for the teaching session.

Results
Results will be presented and discussed.

Discussion and Conclusions
Presenting is a daunting and difficult skill for many medical students and a poor presentation can introduce patient safety issues and medical errors. It is therefore imperative that we develop effective teaching strategies to nurture such important communication skills. The use of a “mock clerking” is an innovative “stepping-stone” in the pathway of a medical student to accomplish such skills.

References
ORDER online: Student partner approaches for design and evaluation of interactive online video tutorials for utilising our novel cyclical ORDER (observe-reflect-draw-edit-repeat) artistic learning process in order to enhance medical student learning and experience.

J Hutchinson, ID Keenan.
ID Keenan, Teaching Fellow, Anatomy and Clinical Skills Centre, School of Medical Education, Newcastle University, UK

Background and Purpose
Acquisition and retention of clinically relevant anatomical knowledge is essential for medical students and visual artistic learning methods can improve anatomy learning\textsuperscript{1,2}. Observation, reflection and abstract conceptualisation are likely to be important in the learning process\textsuperscript{3} and drawing and critical looking have been proposed as effective learning methods in medical education\textsuperscript{4}. Based on these findings, we have previously shown that our novel cyclical artistic learning method comprising the processes of observation, reflection, drawing, editing and repetition (ORDER) can enhance medical student learning of anatomy\textsuperscript{5}.

Our observations indicate that a high proportion of medical students possess previous artistic qualifications and utilise artistic methods when studying and revising anatomy\textsuperscript{5} and we propose that ORDER can be most effectively used as a self-study resource. A recent systematic review has determined that e-learning tutorials can be effective for medical student learning and performance\textsuperscript{6} and it has been suggested that anatomy e-learning resources are typically used as tools to supplement traditional learning methods\textsuperscript{7}. We aim to encourage medical student use of ORDER through integrating our learning process into interactive online anatomy video tutorials. We hypothesise that our ORDER tutorials will enhance student learning and experience and will result in improved test performance when compared to standard online anatomy tutorials.

Methodology
Having identified a shortage of project opportunities for undergraduate students in anatomy and medical education, we have utilised a student partner approach. Our student partner has been instrumental in the design, development and evaluation of our ORDER tutorials using the interactive online tutorial system at Newcastle University. We have performed mixed-method approaches incorporating pre-post knowledge testing, survey questionnaires and medical student interviews in order to triangulate the value of our online video tutorials.

Results and Conclusions
Our findings indicate that our online interactive video tutorials can be valuable for enhancing the learning of anatomy by medical students. Student partners also benefit from our strategy in terms of their development and experience in research.

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\textsuperscript{5} Backhouse, M., Fitzpatrick, M., Selwyn-Gotha, J., Allen, R. & Keenan, I. D. in Anatomical Society Summer Meeting Skin and Bones. 189-213 (Journal of Anatomy).
**Artatomy: A transdisciplinary student partner approach for development and delivery of an exhibition event for the presentation of anatomical artwork created by medical students**

J. Hutchinson, A. Stubbs, A. Tiri, R. Allen, ID Keenan
ID Keenan, Teaching Fellow, Anatomy and Clinical Skills Centre, School of Medical Education, Newcastle University, UK

**Background and Purpose**
Our previous work has indicated that a high proportion of medical students have undertaken artistic qualifications prior to their medical studies and that many utilise artistic learning methods including drawing when studying and revising anatomy. We aim to inspire medical and biomedical science students to develop their artistic learning by providing an opportunity for them to partake in cadaveric drawing workshops with experienced visual artist Rachael Allen with the intention that students will subsequently present their drawings alongside self-directed artworks in an exhibition context. We propose simultaneously implementing undergraduate student partnerships to foster development of transdisciplinary experience and transferable skills in event organisation.

**Methodology**
A team of undergraduate medical and biomedical students in collaboration with a professional artist have researched, organised and curated two Artatomy exhibitions of student artwork produced in drawing workshops and collated from a wider call for submissions. Our opening event on campus for staff and students has been followed by a durational show at a Newcastle University bioscience research institute that has attracted wide academic and public audience engagement.

**Results and Conclusions**
Interest generated by the event, the volume and quality of artwork submission and artist and audience feedback from our events indicates that these events have been successful in achieving the intended outcomes and have established a legacy for further arts and medicine engagement. This project was funded by Newcastle University Institute of Creative Arts Practice (NICAP).

Student partner approaches for investigating the use of social media as a tool to enhance anatomy learning and promote student engagement in medical education

A Stubbs, J Matthan and ID Keenan
ID Keenan, Teaching Fellow, Anatomy and Clinical Skills Centre, School of Medical Education, Newcastle University, UK

Background and purpose:
Social media is now accepted as a part of everyday life, with 864 million people logging onto Facebook daily (1) and 500million tweets being sent every day (2). As a result of increasing popularity, the use of social media is being steadily incorporated into higher education. Current literature suggests social networking sites can be used to improve the learning of course content, develop critical and reflective thought as well as increasing student involvement (3). While many descriptive studies have explored social media in education (4), supporting data and evidence are limited (5). We aim to investigate medical student’s perceptions of the use of social media in education and to determine if Twitter and Storify can enhance knowledge acquisition and retention and student learning experience within a medical degree programme.

Methodology
Having identified a shortage of project opportunities for undergraduate students in anatomy and medical education, we have utilised a student partner approach whereby an undergraduate biomedical science student has designed, developed and implemented a pilot evaluation of the use of social media as an educational tool in anatomy teaching and learning. We have carried out pilot mixed-method approaches incorporating experimental methodology, survey questionnaires and student interviews in order to triangulate the value of our techniques.

A questionnaire was distributed to first year medical students at Newcastle University to explore their use and perceptions of social media in their education and how it could be incorporated in the future. Semi-structured interviews were conducted in order to further explore and analyse any themes arising from student perceptions of social media in their education. To address the impact of social media on student learning, first year medical students completed multiple choice question tests on lecture content following posting of content-relevant tweets and the production of a Storify story by the lecturer. The test results of students actively reading the social media lecture summaries were compared to those who did not interact with social media.

Results and conclusions:
Our preliminary pilot data suggest that the use of social media as a teaching and learning tool can enhance the student learning experience of anatomy and can promote engagement of students in educational content. Future studies and analysis will explore this area in greater depth and address how social media can be used further in medical education.

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Specialty study weekends for medical students - enhancing learning and career choice

BA De Souza
BA de Souza, bds@dr.com

Introduction
The medical school curriculum is packed and makes it difficult for some students to experience a specialty of interest. The advent of Modernising Medical Careers (MMC) made it imperative that medical students choose their specialty early on. During foundation year 2 (F2) doctors get a chance to sample a range of specialties. It is at this stage that up to two weeks' study leave is granted so medical students can have a “taster” session in a specialty.

St George's University School of Medicine in Grenada, West Indies has a large UK clinical faculty and clinical programme, which began in 1978. The UK clinical programme has offered clinical students specialty study days originally to fill any discernible gaps in the clinical curriculum. These cover a number of specialties including ENT, ophthalmology, pain management, plastic surgery, dermatology and radiology, orthopaedics and accident and emergency.

Method
The study day are split into two sessions, the morning session is comprised of lectures pertinent to a specialty. This is followed by a series of short lectures that include emergencies within that specialty and dealing with them, for example, acute burns in plastic surgery. These lectures form part of the syllabus needed in a medical school core curriculum.

Afternoon sessions involve skills stations, demonstrations, patient examination and assessments of practical skills. This part of the study day involves junior doctors within the department who can provide help for practical sessions and at the same time practise their teaching skills.

The study weekend ends with assessment and evaluation of learning ensuring students have benefited from the course. In addition, students are given careers advice about chosen specialties. Professional lifestyle in the appropriate specialty is included here and issues such as whether or not a specialty is appropriate for part time or shift work.

Results
The feedback from students been quite overwhelming —the choice of topics have been modified over the years in response to student demand and the courses as well.

Conclusion
The study days are not only an extremely valuable educational tool, but also provide a great social opportunity for people to meet their fellow students with the added peer support that gives. It is also a wonderful opportunity to inform students about different specialties, including expected professional lifestyles, which are so helpful to students when choosing their future specialty preference.

References
2.
Simulation Intervention based on Serious Untoward Incidents lead to Self-Reported Changes in Practice

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Background and Purpose
Increasing patient safety and reducing medical error are key objectives in postgraduate medical education. The use of simulation teaching to these ends is advocated in the WHO’s “Patient safety curriculum”\(^{(1)}\) and the Institute of Medicine’s ‘To err is human’\(^{(2)}\).

North Tees and Hartlepool NHS Foundation Trust has looked to close the loop from error back to staff education. The simulation faculty are integrated into the Serious Untoward Incident (SUI) committee, and identify themes from SUIs suitable for simulation teaching.

Two identified themes for simulation education were the management of pneumonia and acute kidney injury (AKI). The aim of this project were to assess if the educational intervention has impacted on self-reported clinical practice.

Methodology
A two hour simulation based educational intervention addressing management of Pneumonia and AKI was delivered to small groups of FY2 Doctors. An evaluation form collected after the session used Lickert scales to assess the sessions ‘usefulness’ and ‘relevance’. An anonymised survey using an online tool (SurveyMonkey) was sent to attendees trust email accounts 6-10 weeks after the teaching. This survey asked whether their practice in managing pneumonia or AKI had changed since the teaching, before asking participants to specify any changes in practice.

Results
The FY2 doctors rated the session 9.5/10 for usefulness and 9.6/10 for relevance. In the follow-up survey, all responders felt the teaching had provided new learning, and all responders reported their practice has changed since the simulation teaching. Provided examples of changes in practice included:

- “lower threshold for early recognition of sepsis and initiation of Sepsis 6 pathway”
- “More aware of the need to prioritise these patients”
- “I now prioritise organising and reviewing the Chest X-ray”
- “I am more mindful of [prognostic] scores and how to interpret them”.

Discussion and Conclusion
The self-reported change in practice suggests that the simulation teaching is impacting on clinician’s behaviours. This is supported by the provision of specific examples of change. Common themes in free text answers were improvements in: achievement of Sepsis Six principles, patient prioritisation, and the use of prognostic scores. Although this suggests lasting learning and behavioural change, the accuracy of self-assessment of practice is uncertain. Confirming the impact of teaching on clinical practice is fraught with practical challenges and potential confounders. This project has inspired a further study looking to assess if there is observable change in practice following simulation teaching through auditing achievement of pneumonia targets by individual doctors.

The depth and breadth of anatomical knowledge medical students are expected to acquire over the duration of their studies remains a debated topic. The General Medical Council’s ‘Tomorrow’s Doctors’ (2009) sets out outcomes medical schools are expected to deliver and what employers of new medical graduates can expect to receive”. This includes being able to explain normal human structure and function (outcome 8a). The GMC document references, as related document, the Anatomical Society Core Syllabus in anatomy for medical students (McHanwell et al., 2007) in support of this outcome. This project was developed by the Education Committee of the Anatomical Society and following a consultation with members published in 2007. This syllabus contains 163 suggested learning outcomes grouped by body region. The syllabus has been adopted in part or in whole by many medical schools in the UK and world-wide. However, it remains a consensus statement and so it was felt that after a period of time in use it was appropriate to review the content of the syllabus by a more rigorous approach. Delphi processes have been widely employed as a rigorous methodology for structuring “expert” opinion. They are based on the premise that individual statistical predictions are stronger than unstructured, face-to-face group predictions (Keeney et al., 2011). A two-stage Delphi process was employed to seek expert opinion of the current Anatomical Society syllabus. A Delphi panel was constructed involving 30 expert clinicians and anatomists. The experts were asked in the two rounds to ‘accept’, ‘reject’ or ‘modify’ (first round only) each statement. From the original syllabus 47 statements (29%) remain unchanged, eight were removed and 2 added. The remaining 108 statements were modified in part or in whole. Each final statement achieved 90% consensus. The revised core syllabus provides an up to date guide to the anatomy medical graduates should know and be able to apply.

References
Safe and Effective Clinical Outcomes clinics in Primary Care: students’ perceptions of their educational value

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Background
Untimed simulated surgeries in a general practice setting with the focus being on safe and effective clinical outcomes (SECO) were first developed and introduced into undergraduate medical student education in Otago, New Zealand in 2004(1). Similar clinics have been piloted at Keele during 2014-15 with year 5 students. The clinics give students opportunities to manage entire consultations and to make and implement clinical decisions with simulated patients (SPs) in a real medical practice. Faculty support is available by phone in the form of ‘simulated colleagues’. Formative feedback is given by the SPs on the achievement of the pre-determined outcomes from the ‘patient’s perspective’ on consultation skills and from a ‘medical perspective’ on clinical decisions, medical records and, when collegiate advice was sought, case presentation skills. The case mix reflected that in general practice and included acute and chronic presentations of illness, prescribing issues, social problems, and ethical challenges.

Aim
To explore students’ perceptions of the educational value of SECO clinics.

Method
Ethical approval for this study was obtained from the Medical School Research Ethics Committee. Two clinics were held involving 19 year 5 students. The students were invited to take part in semi-structured group interviews immediately after their clinic. Analysis was thematic, the themes arising from the data.

Results
13 students agreed to take part in the interviews. The mean number of cases seen per two hour clinic was 3.4 (range 2-5). The students enjoyed the clinics and wanted more of them. They identified gaps in their knowledge and recognised that they had had an unprecedented opportunity to develop the skills needed to make clinical decisions and take responsibility for them, and to handle uncertainty, as a result of having to manage the whole consultation without being able to “play the student card”. The fictional contract was powerful. Students found the feedback from faculty and SPs useful and most had plans to implement their learning arising from it. Negative comments related only to logistic issues.

Discussion
These clinics provide opportunities for learning and practicing, in an authentic setting, skills which students need to be prepared for their foundation years. The students recognised and valued the opportunities and expressed a clear appreciation of the educational value of the clinics, which they had not experienced anywhere else in the five year programme.

Reference
Cognitive Reflection and Patient Safety

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Background and Objectives
Clinical decision making is a unique process employing knowledge of pathological conditions, explicit patient information and experiential learning¹. With increasing emphasis on evidence-based practice, a multidimensional approach to decision making combines information processing and patient-specific elements which may provide clinical cue and pattern recognition¹,². Cognitive reflective testing is an accurate method for predicting performance and is designed to measure the tendency to override immediate, intuitive (yet incorrect) responses³. Awareness of cognitive reflective processes may improve performance and decision making⁴.

We aimed to determine if cognitive reflection exerts a positive influence on clinical decision making in undergraduate medical students.

Methodology
153 final year undergraduate medical students completed a 3 hour interactive Safe Thinking Workshop on nontechnical skills and patient safety, incorporating basic concepts relating to metacognition. All students participated in cognitive reflective testing during the workshop. The students were then asked to inspect and interpret a set of arterial blood gas results relating to a patient with acute respiratory distress, then answer a short questionnaire addressing biochemical diagnosis, clinical diagnosis and effective management. A separate question was embedded in the questionnaire to determine if students could gauge the severity of respiratory distress. The study group (n = 78) completed the questionnaire immediately after the workshop, whilst the control group (n = 75) completed the questionnaire prior to the workshop.

Results
The mean total score for study students was 80.5%, with a score of 57.9% for the control group (t-test; p<0.05). Correct classification of illness severity was observed in 13.2% of study students, compared with 4.1% of control students (p<0.05).

Conclusion
These results suggest that clinical decision making and recognition of illness severity may be enhanced by specific teaching in nontechnical skills, metacognition and cognitive reflection.

References
Inverted radiology: The New Way to Teach Chest X-rays?

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**Background and Purpose**
Radiology is traditionally taught using the standard radiological view. However, doctors often review images in both the standard and inverted views, to help visualise certain pathologies. We undertook a pilot study to determine if students felt viewing chest X-Rays (CXR's) using both the standard and inverted modes was beneficial and if they felt certain pathologies were easier to identify on particular modalities.

**Methodology**
We sourced thirty CXR images, showing one abnormality, namely consolidation (no=10), pneumothorax (no=8), mass lesions (no=3), “other” abnormalities (n=6) and 3 normal CXR’s were also included. Each CXR was converted to inverted view using Adobe Photoshop. There were two Powerpoint presentations each with all 30 images in the same order. Each presentation had either the inverted or standard view of each image. Students sat both presentations. After both sessions we asked students to complete a feedback sheet asking (1) whether students use the inverted mode, (2) whether they preferred the inverted or standard mode and (3) whether there were certain pathologies that they felt were easier to see on either mode.

**Results**
9/35 final year medical students attending our Academy attended both sessions. A further 2/35 attended the second presentation and so their feedback results are included. 6/11 (55%) of the students look at CXRs monthly and 2/11 (18%) view CXRs weekly. 100% of students had never evaluated a CXR in the inverted mode before, with 9/11 (82%) stating that they were not aware of the inverted function. After the two sessions 4/11 (36%) of students stated that they preferred to review images in the standard mode, 1 student preferred the inverted mode and 6/11 (55%) of students had no preference. Students commented that artefacts and pneumomediastinum were easier to view on standard views whereas pleural effusions, pneumoperitoneum, masses and bone abnormalities were easier to view on the inverted views. There was a divide as to whether pneumothoraces and consolidation were clearer on either modality.

**Discussion**
Students are practiced in reviewing CXRs in the standard view. After experience with both modalities the majority of the group expressed no clear overall preference between standard or inverted views. Those involved in teaching chest radiology should consider introducing the concept of using inverted images.
A Review of Foundation Year 1 Doctor Prescribing in a Large Teaching Trust

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Introduction
It is widely known that prescribing errors are commonplace with a recent study showing that 7% of all prescribed items contain at least one error. 1 In Newcastle almost a quarter of all reported incidents in 2013/14 were attributed to prescribing errors. By improving medication error incident reporting and learning Trusts can prevent recurrence of prescribing incidents 2. However a more proactive approach which assesses the ability of a doctor to prescribe safely and provide individualised feedback may help the trust to identify common weaknesses in order to target training and mitigate against errors.

Aims
• To review junior doctor prescribing to provide reassurance of quality and safety.
• To assess compliance with local guidance and e-prescribing processes.
• To identify and provide feedback on areas that require improvement or further training.
• To inform safe prescribing training for future trainees

Method
An assessment tool was designed to review of actual prescribing and was scored 1 (unacceptable) to 5 (very good) with facility for additional comments about particular strengths and further learning needs. Each junior doctor was assessed at the end of their first four month rotation by the ward clinical pharmacist who had worked most closely with them and the results of the assessment given to the doctor for discussion with their educational supervisor. The results were collated in order to identify common themes and inform training.

Results
67/68 trainees were classed as acceptable or above but some areas for improvement were noted. 81% of trainees were deemed as acceptable when taking into indicating that further training may be required in this area. Other areas that may require further input relate to the use of e-record and taking account of patient factors such as renal function. It was pleasing to note that all trainees were recorded as being good at prescribing high risk medication.

Conclusion
A pharmacist review of junior doctor prescribing provides reassurance of individuals’ safe prescribing and ensures training is designed around common gaps in prescribing knowledge. Trainees report valuing the real time feedback in addition to theoretical teaching.

References
Is there a place for a dedicated clinical skills trainer in undergraduate medical education?

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Background
It is a requirement of the General Medical Council (GMC) that medical students demonstrate competence in a range of procedures before they reach the end of their undergraduate medical training. At the University of Bristol, students are given a clinical and procedural skills (CAPS) logbook to record competencies gained in these procedures, which are mapped to those listed in Appendix 1 of the GMC's document Tomorrow's Doctors.¹

Often, clinical staff can find it difficult to dedicate time to medical students due to patient demand. At Bath Academy a dedicated clinical trainer post has been created to address this. The Clinical Skills Trainer is required to be competent in the majority of skills listed in the student logbook and should have experience as a healthcare assistant in an acute specialty setting.

Methods
The Clinical Skills Trainer role commenced in February 2014 for a one year trial period. The staff member selected for the role had previously worked as a senior healthcare assistant in theatres and intensive care and had experience in 23 of 35 logbook procedures. On commencement of the role, additional training was given in the remaining skills. During the trial year period, the Clinical Skills Trainer taught students in a clinical skills laboratory and then supervised them individually performing procedures on patients in the clinical setting. Feedback was sought from the students to ascertain their views on the post.

Results
Student feedback has highlighted benefits and limitations which will be presented.

Discussion and Conclusions
The role of the Clinical Skills Trainer has highlighted three major benefits. Firstly, the requirements of the GMC have been achieved with high quality consistent training, facilitating the transition from practice in the skills lab to performance in the clinical environment. Secondly, students have greatly appreciated a dedicated trainer to help them with the transition to performing skills in the clinical setting. Finally, this role is cost-effective for the academy. The Clinical Skills Trainer works 24 hours per week and in addition to dedicated time for skills supervision the role releases other teaching professionals to devote time to more bedside teaching, permitting more focus on history taking, examination and diagnosis formulation.

References
Teaching on LGBT healthcare issues as part of role modelling and consultation skills education for tutors

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Background and Purpose
Second year medical students at the University of Bristol have received focused teaching on healthcare for the LGBT (lesbian, gay, bisexual and transgender) community for four years, education that was developed and is coordinated by a third year medical student. The workshop covers health inequalities, stigma, homophobia, heterosexism and gender dysphoria, and is facilitated by trained clinical student peers. However, there is no such teaching for qualified doctors, some of whom are either outwardly homophobic or do not confront homophobia in colleagues, and are nonetheless involved in educating medical students. This not only may lead to psychological trauma to patients, but is also a poor example to medical students learning how to navigate the hospital environment, some of who are likely to identify as LGBT themselves.

The overall aim is to raise awareness of LGBT issues amongst Year 3 tutors, and to understand the importance of homophobia and heterosexism in the education environment.

Methodology
This is an ongoing project involving 40 doctors teaching on the Musculoskeletal Diseases, Emergency Medicine and Ophthalmology unit at the University of Bristol. The unit lead and a medical student developed and led the teaching, which was based on the material delivered to medical students, with the added component of the significance of role modelling to students. The session focused on why LGBT matters are important in healthcare, disclosure issues for patients and doctors, and how they as doctors and educators could support patients and doctors and challenge homophobia.

Results
Results from the pre- and post-workshop questionnaires will be analysed in detail and presented after data collection. Information and advice on developing and structuring a similar session in other universities will also be presented.

Discussion and Conclusions
To our knowledge, this is the first project of its kind in the UK, as medical education is often heteronormative in its focus. Past feedback from student workshops has been extremely useful in shaping the session for qualified doctors. We hope that this workshop will help tutors understand the impact of homophobia and heterosexism, and provide a positive example to students in encouraging them to behave in ways promoting the wellbeing of their LGBT patients. Teaching such as this may also improve the interactions between doctors and their LGBT peers and medical student colleagues.

References
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Understanding and Improving Colonoscopy Reporting Amongst Gastroenterology Fellows in Canada

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Background and Purpose
Effective written communication is a vital competency that must be attained by all physicians1, but medical trainees receive little formal instruction2-3. Colonoscopy reports (CRs) serve an essential role in communication and quality assurance of colonoscopies4-6; but their quality is variable, suboptimal and often incomplete despite guidelines recommending standardized reporting elements7-9. It is unclear how gastroenterology (GI) trainees learn to create CRs.

The purpose of this study was to determine how GI trainees learn to produce CRs, what reporting elements are commonly excluded and which variables predict more complete CRs.

Methodology
Using an online survey, colonoscopy reporting behaviours of English-speaking Canadian GI fellows and program directors (PDs) were evaluated and compared for compliance with published guidelines from the US Reporting and Data System (CO-RADS) and Canadian guidelines on required endoscopy report elements5-6. Descriptive statistics were generated and multivariate regression performed to identify barriers and facilitators of comprehensive CRs.

Results
Seven PDs and 24 GI fellows completed the survey (response rate = 39.2%). The most prevalent CR generation methods were electronic data entry software among GI fellows (54.2%) and telephone dictation among PDs (42.9%) (p = NS). GI fellows included a mean of 79.2% of guideline-recommended reporting elements, PDs 85.3% (p = NS); 16.7% of GI fellows and 28.6% of PDs included ≥ 90% of recommended elements (p = 0.076). The most common reasons for excluding elements were lack of previous teaching (GI fellows; 36.5%), and the elements were recorded elsewhere (PDs; 33.3%). The most frequently cited methods for learning to produce CRs were informal instruction from supervising staff (GI fellows; 54.2%) and practical experience (PDs; 71.4%). Awareness of US guidelines predicted greater inclusion of reporting elements.

Discussion and Conclusions
Canadian GI fellows' self-reported compliance with CR guidelines was relatively low and most learned through informal instruction from clinical supervisors. Interventions to improve this should include formal and informal instruction, feedback, decision-support tools and endoscopic electronic medical records. A knowledge translation intervention has been designed, incorporating these elements, with the intent of improving CRs. Evaluation of this will also inform development of written communication skills in other areas. This study is the first to: a) examine CRs specifically amongst GI fellows; b) compare reporting amongst fellows and certified gastroenterologists; c) investigate how endoscopists learn to generate CRs; d) directly examine why endoscopists exclude individual CR elements and, e) examine endoscopists' awareness of both US and Canadian guidelines.

Pecha Kucha - 20 slides of misery?

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Background and Purpose
PowerPoint is the most commonly used format for presentations, but can be seen as boring due to heavy reliance on bullet points. Pecha Kucha was devised 2003 by two architects who wanted a format where people could share a passion without talking too much. Twenty images, each lasting 20 seconds, allows for strict and easy time management of presenters. Informal ‘Pecha Kucha nights’ are now global. However, an ERIC search found only four papers on their pedagogic use, though they are increasingly being explored within academia, for example as a way of improving student presentations and for sharing research.

Methodology
Two small exploratory evaluative studies were performed within one institution. Questionnaires were devised for participant experience both as presenter and audience to collect data on familiarity with Pecha Kucha, advantages and disadvantages, and whether they would use Pecha Kucha in future.
Study one: Five speakers were invited to showcase their online inductions using Pecha Kucha in a group of 20 academics involved with distance learning.
Study two: 12 intercalated medical students studying Medical Education presented on a self-selected educational topic.
The study was introduced before the presentations, paper questionnaires handed out, and participation in the study assumed by completion of the questionnaire. The questionnaire was anonymous and all questions optional. A tick box for permission to use anonymised quotes in future dissemination was included.

Results
All 12 students completed both questionnaires. In the faculty development session 4/5 presenters and 10/20 audience questionnaires were completed. Only five (4/12 students and 1/4 staff) had presented using Pecha Kucha before yet few sought help with the process (three online, one a friend). Although generally they liked the format for organising thoughts, time to prepare and difficulty finding suitable pictures were the most mentioned disadvantages. The majority found presenting difficult, citing stress, panic at getting lost, timing and feeling of pressure to perform.
Those viewing liked the pace and visuals when used well, but felt the talks were rushed, and often stilted due to presenters’ regimented delivery to ensure time-keeping e.g. reading from a script.
Both groups overall felt the format could be useful within teaching, e.g. introduction or summary by tutor, showcasing innovative teaching methods, student assessment. Although only 1/10 academics currently used Pecha Kucha in teaching now plan to in the future. Few felt it suitable for public engagement.

Discussion and Conclusions
Developed for assessment, van der Leuten’s utility formula is useful here. If a method has zero acceptance or practical value its overall utility will be zero unless both acceptance and practicality are improved. This small study found the method acceptable to the tutors, less so for students, though tutors were keen for their students to present in this format. Both groups highlighted problems with practicality. The next step should be to develop training based on problems identified by both audience and presenters and measure change in acceptability and practicality. This should be alongside study of the learning value of Pecha Kucha as presenter and as viewer.

References
Breaking down the Barriers - Improving communication on a simulated ward round

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Background and Purpose
Patient handovers and calling for help are key skills and competencies not formally taught to medical undergraduates but essential for patient safety. Previous work undertaken by us using an interactive small group workshop format as an educational intervention to teach these skills demonstrated benefit (significantly improved scores post workshop)¹ but has also raised questions about possible barriers faced by juniors².

Plan and Methodology
Students attending our medical school undertake student assistantships. This is a key part in preparation for practice as a Foundation doctor with exposure to key skills and competencies that are not covered well in other parts of the curriculum. This year all (n=274) will take part in a simulated ward round and accompanying workshops. We plan to investigate their previous experience in patient handover and referral and barriers encountered by questionnaire. We also aim to investigate whether students who had attended a workshop which focuses on these issues, prior to the ward round, perform better at this task than those who attend it afterwards. This will be done by use of a checklist score (SBAR proforma) which was used and validated in 2014¹. Introduction of the SBAR tool has been shown to reduce the incidence of harm to patients by 50% in one healthcare setting³.

Results
During the simulated ward round which will be held in March 2015 a patient requires urgent inter-speciality referral by phone. The handover and referral process will be scored using a checklist (SBAR proforma) and the results will be presented along with questionnaire data on handover and referral experience.

Discussion and Conclusions
Efficient and effective communication within clinical teams and between teams caring for the patient in different settings or at different times is essential. We hope to demonstrate that our intervention has a positive impact on these skills for our future junior doctors.

References
Changing student’s attitudes towards disability. A comparative study, between large and small group teaching, on medical students’ attitude towards disability

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Background and Purpose
Disabled people can experience many barriers to accessing adequate healthcare 1. Experiential workshops involving people with disabilities can teach communication skills and also change attitudes towards disability 2. However, the logistic and resources required for experiential teaching, often using small group work and recruitment of those with disabilities, are not inconsiderable.

The study aims to assess the students’ attitudes towards disability using a Multi dimensional Attitudinal Survey about disability (MAS) 3. It will compare the effects on the student’s attitudes between two interventions. A lecture on assisted and augmentative communication (AAC) and an experiential workshop involving disabled volunteers who use AAC. This may help inform as to the relative merits of these different methods of teaching in order to devise suitable teaching in this area, whilst making the best use of the resources available.

Methodology
This research involved a comparative research methodology. It involved a questionnaire survey and analysis of 2 cohorts of students. The first cohort of medical students received a communication skills lecture about AAC. The second cohort of medical students received a small group experiential communication skills workshop.

Each cohort was given a MAS before and after the teaching session. The questionnaire results will be analysed for several factors. These include differences between the cohorts before the educational intervention, any significant change in attitude following the educational intervention and comparing the magnitude of attitudinal change between the different educational interventions.

Results
The data is currently being analysed. Results will be available at the conference.

Discussion and conclusions
This will be pending the results. Limitation of this study include the use of two different cohorts for the intervention. Ideally the same cohort should be randomised as to which intervention they would receive. Logistically this was not possible. Taking the questionnaire before the intervention as a baseline, may help mitigate this.

The questionnaire depends on self reporting of attitudes, changes may not reflect any change in actual behaviour. This is an area that would merit further study to see if the cohort’s reported attitudes are reflected in actual behaviour when dealing with disabled patients.

Word count 348 excluding title, authors and references

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Continuing Professional Development
Exhortation does not equal Education: From evidence to practice.

J MacDonald, C Garvie, S Gordon, M Huthwaite, F Mathieson, AJ Wood, S Romans
J MacDonald, Senior Lecturer, Dept of Psychological Medicine, University of Otago, Wellington, New Zealand.

Introduction
One of the challenges in Continuing Professional Development is that of how to change the behaviours of practitioners. While Best Practice guidelines, evidence-based reviews, and expert opinions abound, there is ample evidence that translating these into change in practice is not straightforward.

The long-term prescription of hypnosedatives to service users with psychiatric illnesses with insomnia is common, (1) despite guidelines to the contrary. We undertook research to investigate the attitudes and barriers to change in both service users and prescribers that underly this continued prescribing.

Methods
This was a qualitative research approach. We used an innovative research design that involved a service user at all stages of the project. Focus groups of service users and psychiatrists met, initially separately but subsequently together, to explore each others’ perspectives. Data were analysed thematically.

Results
Four themes emerged. In this presentation I will focus on the barriers to change. These include the lack of resourcing (time and knowledge) of psychiatrists; doubt, in both service users and psychiatrists, regarding the effectiveness of alternatives to hypnosedatives; service users’ expectation of a prescription when visiting a doctor; and the financial and time cost to service users of alternatives.

Both groups identified that psychiatrists have very limited time during appointments to discuss alternatives to prescribing medication for sleeping, and largely lack the knowledge of alternatives if they had the time. For service users, practising more behavioural approaches to managing insomnia was seen as taking too long in already busy lives. Neither group was convinced that non-medication alternatives were as effective as “pills”.

Discussion
Our results suggest, as has been noted in previous literature (2,3) the need to address broader systemic issues for changes in prescribing practices to occur; and that these changes need to include service users. As medical educators, this raises issues for us of how to educate policy-makers and those disseminating guidelines so that their publications produce change in practice. This may need to involve, for instance, workshops or other interactive methods of presenting the material. In particular, the systemic issues, particularly time pressure on prescribers, have not, to our knowledge been addressed as part of attempts to change practice.

A junior doctor led medical education conference – creating communities of learning

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Background and Purpose
In June 2014, academic education foundation trainees from Exeter organised a medical education conference for junior doctors and medical students. Eighty delegates attended from across the UK and as far as Malta! The aim of the conference was to showcase the important contributions that trainees make to medical education, raise awareness of current ‘hot topics’ in medical education, develop teaching skills, highlight career opportunities in medical education and importantly, to facilitate networking amongst likeminded trainees alongside senior eminent medical educators.

Methodology
The conference programme was varied and delivered through a variety of modalities. The day was introduced by a session on ‘the nuts and bolts of medical education’. This was followed by an interesting talk about the development of an online shared learning resource ‘meducation’, which was started by an entrepreneurial medical student and inspired many aspirational trainees in attendance. An interactive ‘Simulation’ session kept everyone engaged and a whistle stop tour about ‘Medical Education research’ provided a road map of how to get involved in research and medical education career paths. The day concluded with an inspiring talk about ‘medical education abroad’ with lessons shared about adapting teaching styles to the need of the learner across cultural and linguistic barriers and reminding us what education is all about, improving care for patients.

Results
On their application form delegates stated their reasons for attending the conference. Qualitative thematic analysis identified the main reasons as: interested in learning more about medical education; interested in research; interested in a career in medical education; to develop teaching skills; an opportunity to present their work and receive feedback; to learn about other trainees teaching experiences and share ideas.
Feedback was gained via qualitative questionnaires and was universally positive. Of note, delegates valued the session on ‘medical education abroad’ and the power of teaching through story telling. The main suggestion for improvement was that delegates would have liked more time to network.

Discussion and Conclusions
The power of conversation and the importance of creating opportunities for likeminded individuals to meet, share experiences, and create a community of learning was highly valued. The use of narrative and story telling to teach and practice medicine are well established, but was clearly a new concept that was embraced by many trainees. This will shape the design and delivery of future conferences and teaching.

References
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Curriculum Planning
Curriculum matters – British Geriatrics Society (BGS) versus University of Nottingham (UoN) undergraduate curricula: are we on the same page?

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Introduction
The BGS recommended curriculum in geriatrics for medical undergraduates is an evidence-based expert-judge content validated document\(^1\). It maps to the GMC document *Tomorrow's doctors*, which provides statutory guidance on undergraduate teaching\(^2\). To benchmark practice against gold standard guidance, to identify opportunities for local curricular development and to facilitate comparison with other UK medical schools we set out to map our local UoN curriculum to the national BGS guidance.

Methods
Each of the BGS objectives were initially compared to those learning outcomes associated with the UoN geriatrics module by three reviewers. Results were recorded in a spreadsheet under the headings complete mapping, partial mapping and no coverage. The table was expanded to give the specific objectives in each category. Further in-depth analysis then took place by reviewing all of the learning outcomes, for all taught modules over the entire UoN course, to look for further positive matches. The face validity of the curricular map was established through review by a panel of expert geriatrician educators based within UoN who had not participated in the initial mapping process.

Results
There was complete mapping to 28 out of 34 of the BGS curriculum outcomes. There was partial mapping to 4 of the BGS outcomes (theories of ageing; anatomical changes of ageing; finer detail of social services provision; generalizability of research to older adults) and 2 outcomes of the BGS outcomes had no coverage in the UoN curriculum (designing research applicable to older adults; community geriatrics).

Conclusion
The Nottingham curriculum covers the majority of the learning outcomes set out in the BGS undergraduate curriculum. The health care of the elderly course at Nottingham University medical school is currently being reviewed and future developments will consider the full BGS curriculum. The areas that need to be addressed are developing curriculum objectives surrounding research design for older adults and building in community geriatrics experience into the curriculum and clinical placement.

Declaration
An abstract for this piece of work has been published in the conference abstract book European geriatric medicine at the European Geriatric Medicine Society meeting in September 2014 – however that abstract has multiple differences from the abstract above.

References


Novel Student Selected Component in Leadership & Management at Bath Academy

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Background:
Tomorrow’s Doctors are “…expected to undertake various team roles including leadership and the ability to take leadership from others.” \(^1\) Stringfellow et al. 2014 report that 65% of responding medical schools valued or highly valued the importance of medical leadership or management skills versus 93% of students, suggesting a discrepancy in the provision of teaching and exposure. \(^2\) Abbas et al. in 2011 felt that medical students were indeed more open to receiving teaching on medical management and leadership than had previously been thought. \(^3\)

Third- and fourth-year medical students at Bristol University have the opportunity to choose a Student Selected Component. These can be experiential, often include a project, and culminate in a written report including a reflective component. This module offers an excellent opportunity for increased exposure to management within the NHS, and for development of team-working and leadership skills.

Methods:
Managerial leads were consulted with regards to potential:
- Shadowing of clinical and non-clinical managerial staff
- Projects including presentation of results

Results:
Identification of potential shadows and projects including:
- Service improvement, trajectory improvement, audit, and business case.
Student feedback and planned course developments will be presented.

Discussion and conclusions:
This novel attachment provides an excellent and sustainable opportunity to develop leadership and team-working skills thereby helping to fulfil the GMC requirements for tomorrow’s doctors. These fundamental, transferable skills are critical for all aspects of clinical and non-clinical life. The students will become involved in key processes within the NHS, and benefit both the trust and patients through involvement in service improvement: a key pillar of clinical governance and their future careers. Further advantages to the students include the built-in opportunity to present their work at a local level, as well as potential submission of work to academic conferences (eg the Faculty of Medical Leadership and Management), both of which provide valuable experience as well as material for their portfolio. Finally the students will gain insight into the management of the NHS, an often-neglected facet of increasing priority as they gain seniority.

References:
The ‘Mastery Programme’ Improving Quality & Safety in High Risk Procedural Skills

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Background and Purpose
Postgraduate medical curricula contain mandatory procedural skills including lumbar puncture, thoracocentesis and central venous cannulation. Previous work in NHS Lothian has shown measurable improvements in the simulated performance of lumbar puncture through the ‘mastery learning approach’ with the addition of in situ training. This improves the fidelity of session and the development of this skill in a more meaningful way.

With a plan to mandate this programme across NHS Lothian we pose the question of whether this combined educational and quality assurance initiative can be successfully implemented for curriculum planning in UK trainees. We propose a feasibility study to identify the challenges and benefits of programme delivery.

Methodology
The NHS Lothian Clinical Skills Mastery Programme was introduced in Edinburgh in 2013. For each procedural skill, trainees receive knowledge packs (written and video resources) and a 2-phase supervised simulated training programme. Phase 1 is in the skills lab (non-clinical) and phase 2 is in situ (clinical environment).

We are currently studying the feasibility of implementing this programme on a board wide scale with particular focus on programme development, logistics of delivery and the leadership and management challenges. We are trialling all 3 procedural skills on one site and thoracocentesis across all 3 acute care sites on trainees where these competencies are mandatory requirements.

Results
A combination of quantitative and qualitative data outlining trainee performance, and identifying challenges and potential solutions of programme development and delivery.

Discussion & Conclusions
‘Mastery Learning’ has an evidence base to support its methodology in the development of clinical skills in the USA1,2. This study aims to expand the current literature to identify whether this form of ‘mastery learning’ can be effectively implemented for UK trainees as both a learning tool and for quality assurance purposes in view of the different pressures the NHS faces.

References
Redesigning the Core Clinical Problems into an agile, responsive interactive resource

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Background and Purpose
The core clinical problems (CCP) underpin undergraduate teaching at Dundee University encompassing patient presentations, clinical vignettes and potential differential diagnosis. The purpose of this project was to take this list and map CCPs to teaching episodes in the curriculum, creating curriculum maps based on a systems-teaching approach. This project is in anticipation of new tagging systems coming on-board within the Dundee virtual learning environment (VLE).

Methodology
Core clinical problems were matched with teaching episodes from across the curriculum listed on the VLE. System webpages were systematically reviewed for teaching episodes including lectures, small group teaching, clinical skills, ward based and clinics. These were matched to the relevant CCPs, this subdivision was done on a system basis allowing for CCP overlap between systems, creating a coherent and logical approach. Generated frameworks were then submitted to system leads for review. Review took place via email or in face-to-face meetings with supervisors to discuss problem areas. Framework maps were then ready to be uploaded onto the new VLE (drupal) via a tagging system matching CCP to teaching episodes.

Results
This project allowed for demonstration of teaching episodes within a system both in the early medical undergraduate curriculum (System in Practice, Years 1-3) and in senior medical undergraduate curriculum (Preparation for Practice, Years 4 and 5). Resulting frameworks allowed for building of an agile and logical approach to tagging teaching content, study guides and other online materials on the Dundee VLE.

Discussion and Conclusion
The current CCP pages have been redesigned to allow agile use of the core clinical problems as a curriculum spine for undergraduate medical education at Dundee. The new framework allows students to approach the CCP pages from a patient presentation perspective (e.g. patient presenting with abdominal pain) to get an overview of resources available on the VLE, or from a specific disease perspective (e.g. "how would a patient with appendicitis present") allowing students to see all teaching episodes where appendicitis is mentioned or considered. Thus the redesigned CCP pages will provide a strong framework for students to build their knowledge upon and to see the alignment between teaching and assessment, as the same CCP frameworks are used to map both.
E-learning
Online Revision Course in MRCS Part A Candidates; Patterns of usage in repeat subscriptions

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Background and Purpose

The Part A exam of the MRCS comprises applied basic sciences with principles of surgery and is common to all four colleges in the UK and Ireland. Traditional study and revision methods are now supplemented with online learning resources. One of these, PasTest (PasTest, Manchester, UK), has been offering online MRCS revision since 2005 and has been used by over 20,000 candidates to prepare for the exam since then. The PasTest course now comprises over 4,300 sample questions and App, Podcast and Video clip components.

The aim of this study was to examine the patterns of usage in repeat subscriptions to an online revision course, with a goal to developing prospective studies and thus optimising revision technology and techniques.

Methodology

We analysed the online data from PasTest for the tri-annual MRCS subscriptions during the specific period; January 2011 to September 2014. Candidates were contacted by e-mail to determine whether they had passed or failed the exam. Statistical analysis was carried out on the number of questions answered by each group using SPSS v22 (IBM Corp., USA).

Results

After data cleaning for duplicate, incomplete or inconsistent entries, there were 5835 individual customers who accessed the service a total of 9387 times. Sub-analysis was performed on candidates who had multiple subscriptions and for whom a definite outcome was known. This group comprised 215 candidates with a total of 583 subscriptions – 109 candidates who eventually passed the exam and 106 who failed. We looked at the number of questions answered during each subscription period in both groups. Both sets of data showed a negatively skewed distribution that was not significantly different between either the first, second or last subscription (Pass group, Shapiro –Wilk test p=0.013; Fail group, Shapiro-Wilk p= <0.001). Kruskall-Wallis tests showed that significantly more questions were accessed in the final attempt than in previous ones; this was true for both pass and fail groups (p=<0.001 for both groups). In the final period, the pass group answered significantly more questions than the fail group (Mann-Whitney U-test 2 – tailed, p=0.0395).

Conclusions

This study has shown that the successful candidates engaged more fully with the online course than the unsuccessful ones, but that results were highly variable. Although the reasons for this are unknown, it demonstrates the potential positive impact that online revision courses can have on exam success and also the potential for monitoring and improving preparation for the MRCS exam.
E-Learning in medical education: feedback from a one-minute paper of an on-line learning resource on prescribing challenges in a GP surgery.

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Background and Purpose
Learners will often use e-learning as part of self-directed learning (SDL), if perceived beneficial or mandatory. Considerable resources are required to develop e-learning; they must be evaluated in order to improve their quality.

Key drivers have raised the profile of prescribing in medical education. However, preparing medical students to prescribe is a major challenge of undergraduate education. An on-line resource on prescribing challenges in a GP surgery was developed and launched into the curriculum at the University of Dundee in Oct 2014. Its aim was to explore, develop and apply prescribing skills in a safe e-learning environment. Designed for 5th year medical students during their 4 week GP attachment, to complement face to face clinical experience.

The one-minute paper is a simple way of creating feedback where learner numbers are large. This pilot study aims to identify the strengths and weaknesses of the on-line prescribing module; and any potential for improvement to maximise learner centeredness. This will later inform further qualitative evaluation work.

Methodology
The pilot study invited sixty-seven 5th year medical students to complete a one-minute paper of the prescribing module. Strengths, weaknesses and areas for potential improvement were sought. Data was reported descriptively and thematic analysis performed on the corpus of text.

Results
Of the 54 (81%) participant responses, an average estimated time to complete the module was 188 minutes (range 80 to 300 minutes). Key themes: i) Strengths – broad range of realistic scenarios; informative feedback; accessible; useful links; and similarities to the GP computer system. ii) Weakness – navigational issues; uncertainty in open question/responses; and more support at completion of resource. iii) Potential improvement – more cases; less information and alternative to screenshot of assessment report.

Discussion and Conclusions
The perceived quality of an on-line resource will influence learner engagement. Preliminary findings suggest that the prescribing module is valued by learners for SDL. Learners identified the opportunity to analyse prescribing issues, use information sources and gain experience of making prescribing decisions. Whilst having the choice concerning pace and deeper learning opportunities. Post-course evaluations tend to measure participant opinions and their personal feelings, not the actual amount of learning that occurred or its impact. That aside, the one-minute paper has enabled a quick insight into what learners liked and did not like about the module. This pilot study will inform further qualitative work; thereby aid the development and evaluation of learning resources and their impact on prescribing.

References
The Specialities Survival Toolkit- An E-learning Module for Final Year Medical Students preparing for Foundation Training.

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Background and Purpose
The undergraduate medical curriculum clinical rotations in the specialties of ENT, Dermatology and Ophthalmology are often brief. Given the range of common disorders seen in these specialties this allocation seems to be disproportionally small. Each year 54% of the population are affected by skin disease (1) while 15% of consultations in general practice involve the head and neck (2).

Medical graduates progressing to Foundation training general report feeling underprepared for this transition (3). The short clinical exposure to ENT, Dermatology and Ophthalmology; is reflected by low student and junior doctor confidence in managing conditions from these specialties (4-6).

In order to facilitate this transition we have devised a Specialties Survival toolkit e-learning module. The aim of this module is to improve final year medical students' knowledge and confidence in recognizing and initiating manage of clinical emergencies in these specialties.

At the University of Nottingham, ENT, Dermatology and Ophthalmology are combined in a 6 week clinical placement (2 weeks each) during the penultimate year of their medical degree. Given the range of conditions requiring a collaborative approach between these specialties we feel that an integrated online tool is a logical extension of this attachment. To our knowledge this resource is unique and has not been initiated elsewhere.

Methodology
The Specialties Survival toolkit e-module was produced using the Xerte© toolkits software created by Nottingham University. It is a collaborative project created by the Clinical teaching Fellows of ENT, Dermatology and Ophthalmology at the Queens Medical Centre, Nottingham.

The e-module will be trialed during the “Transition to Practice” module in the final year of the Nottingham University Medicine course in 2015. To gauge the effectiveness of the learning experience, a questionnaire including pre and post module confidence self-assessment was conducted.

Results
Results from the questionnaire will be analysed and presented.

Discussion and Conclusions
Given the limited exposure of medical students to these specialties we are hopeful that this will prove an effective tool in boosting clinical confidence in the final stages of undergraduate training.

References
1. Schofield JK, Grindlay D, Williams HC. Skin conditions in the UK: a health care needs assessment. Nottingham: Centre of Evidence Based Dermatology, University of Nottingham; 2009.


Virtual patients in a Medical Application, Nottingham University Hospitals.

S Dobbs, J Iqbal, A Raudaschl, B Baxendale, B Rees.
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Background and Purpose
The complexity and breadth of the medical curriculum presents many educational challenges. New technologies and advances in learning enhancement strategies propose a potential shift in the educational paradigm. The integration of virtual patients into the medical curriculum allows for interactive learning; shifting the focus from a passive educator-centred model to an active and individually tailored learning approach. Virtual patients are not intended to replace traditional methods, but rather to complement a blended learning approach.

This study builds on the successful Microbiology application. In collaboration with the original Microbiology designers, ‘Student Surgery’ is an application currently in development at Nottingham University Hospitals for medical students on their surgical attachment. It aims to assist in the delivery of core learning objectives, and augment traditional learning strategies during clinical placements.

Methodology
Six interactive linear cases (Acute Appendicitis, Hyperthyroidism, Inguinal Hernia, Breast cancer, Acute Cholecystitis and Dysphagia cases) were constructed, simulating realistic clinical scenarios that addressed core surgical learning objectives. The content was created by two medical students and reviewed by a surgical teaching fellow. The cases were then subsequently transcribed into a smartphone/tablet application. A pilot app survey and student focus group will be formed upon completion.

Results
This innovative application enables users to download and experience a virtual patient case scenario by assuming the role of a health care professional. Users obtain histories, conduct examinations and consider potential diagnostic and therapeutic strategies. Results from the survey and student focus group feedback will assist in targeted improvements and further development of the application.

Discussion and Conclusions
The integration of e-learning into medical education presents an exciting opportunity to develop new and innovative learning resources. Building on the success of Microbiology, this collaboration demonstrates the potential of virtual patient design, in addition to its variability and utility within the educational framework. User evaluation and constructive feedback will allow for future development of the application. The early results of this study suggest virtual patients are likely to play an increasing role in medical education. The integration of educational applications into the medical curriculum is an exciting development in the teaching resources currently offered to medical students.

References:
Development of an Educational Smartphone app for Altitude Medicine

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Background and Purpose
Over the last decade there has been an increase in the number and usage of smartphones within society. This uptake has been mirrored in the medical community with surveys showing 50-80% of students and medical doctors using medical apps on their smartphone (1,2). This development has opened opportunities in-medical student education. The ability to download and run an app offline is particularly useful for micro-learning such as flash cards. At the same time as the emergence of new IT applications, there has also been a growing interest in altitude medicine due to the increase in expeditions to remote environments (3). The purpose of this project was to produce a working application for a smart phone which could be used on and offline for the education of altitude medicine physiology and pathology.

Methodology
Current smart phone applications related to the teaching of wilderness medicine were reviewed, the Oxford Handbook of expedition and wilderness medicine, Field guide to wilderness medicine, altitude AMS check, altitude sickness detector and Darix 4000. A clear niche for a free, interactive educational application was established. Content was developed which explained the principles and physiology behind altitude medicine. The iPhone Operating System (iOS) application ‘wild med’ was developed. This included an interactive quiz to test and reinforce learning. Initial testing and evaluation was carried out on the iOS simulator on a sample group of ten year 3 medical students.

Results
The early phase of testing relayed information on usability, layout of the application and the learning experience it provided. The feedback we received in response to this application from the small sample group was positive with a number of suggestions for improvements in the interface and layout. 90% of the participant group would download and use the application. The main areas for improvement suggested were; a more interactive interface for the learning chapters, some alterations to clarify the physiology explanations and the addition of a dive medicine section. The quiz to test the knowledge gained was highly valued by the initial testing group with requests for this section to be lengthened.

Discussion and Conclusion
These improvements to the application were implemented and we are planning further assessment and evaluation with a second group of testers. We feel that further development of this specific app and other educational apps like it would be beneficial to student education.

References
3) About the WMS. http://wms.org/about/default.asp (accessed 20th July 2014)
Use of educational hypermedia on sexual and reproductive health for nursing students

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Background and Purpose
Technological advances in information and communication technology have caused changes in education, including the adoption of innovative strategies to facilitate the learning of students. Educational hypermedia can be important tools to improve the contents taught in the classroom, as they provide a dynamic and interactive environment. This work intends to report the experience of using educational hypermedia on sexual and reproductive health.

Methodology
This is an experience report about the use of four different hypermedia on Sexual and Reproductive Health with students attending the seventh semester of the Nursing Program at the Federal University of Ceará. Hypermedia are used since 2014 as a teaching support tool for studies on the subject, counting with the collaboration of teachers and monitors for the implementation. They deal with prevention of cervical cancer, sexually transmitted diseases, family planning and prenatal care. All such topics were validated. On average, classes are composed of 30 students and hypermedia are made available at SOLAR, the University’s virtual environment, with synchronous and asynchronous standardized interaction and monitoring tools. At the end of the course, students evaluate the use of such hypermedia.

Results
All hypermedia have similar tools, as they were all elaborated in the same virtual environment. Tutors can access the history of each student, check out the lessons that have already been viewed, access posted activities, enroll students and interact with them in the virtual discussion room. The discussion rooms appear at the end of the content and present a topic for discussion, which may be the reading of an additional paper or a case study. A learning assessment questionnaire is available, which is corrected in the virtual environment. The "portfolio" tool allows the students to post the requested activities, which are corrected by the tutor. The support material is constantly updated in the virtual environment and allows the student to have access to the most current references on the topics under discussion.

Discussion and Conclusions
The use of educational technologies enhances the learning and satisfaction of the student. The use of new tools should be therefore encouraged, and this is happening in Brazil with the encouragement to allow up to 20% of the classroom time to be replaced by distance learning. The hypermedia used in the course were well accepted by the students, have provided a greater interaction and openness to ask questions, stimulating a more participative, horizontal and challenging learning process.

References
Technology development on the topic of childbirth for Nursing undergraduate programs

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Background and Purpose
The humanized natural birth is a physiological and family event, in which the role of the nurse is to assist the woman so such moment is as safe, quiet and pleasant as possible\(^1\). Therefore, it is necessary that these healthcare professionals are well trained and up-to-date and develop a good clinical eye so that childbirth is assisted satisfactorily. The Virtual Learning Environments (VLEs), especially in the form of websites, are an important support tool for this teaching\(^2\). Several Brazilian universities are currently using VLEs as a teaching method\(^3\). This study aims to develop a VLE dealing with childbirth, in the form of a website, as an aid to the Nursing undergraduate programs.

Methodology
This is a methodological research that includes five steps: 1. Content survey, where the childbirth issues most current and relevant to nursing education were gathered. 2. Production of the media, in which the texts, videos, photos, figures and exercises were produced. 3. Organization of the student’s and the tutor’s space, and the communication means between them, including Messaging, Chat and a discussion room. 4. Preparation of the VLE - all the things produced in the previous stages were made available at the virtual environment. 5. Launching of the VLE - the website has the following URL: www.assistenciaaoparto.com.br\(^4\).

Results
Obstetrics books, manuals from the Brazilian Ministry of Health and of the World Health Organization and scientific articles were used to survey the contents. Pictures and videos were produced by the Skills Laboratory of the Federal University of Ceará. Chats and discussion rooms included actual clinical cases for a thematic discussion. The VLE was prepared in a way as simple, clear and objective as possible in order to provide the user a high-quality teaching and learning environment.

Discussion and Conclusions
To facilitate the learning process, it is necessary for the videos and illustrations to be appropriate, linking the text to the relevant data and being consistent with the actual practice\(^4\). The existence of spaces for the discussion of clinical cases and to answer questions, such as chats and discussion rooms, is also important\(^5\). The content of the virtual environment should provide clarity, simplicity, objectivity and harmony between the texts and images, making the learning process enjoyable and able to arouse the attention of the students\(^6\). We believe that using this material with nursing students will help with the assistance given to natural childbirths.

References
Use of Smartphones for Point-of-Care Clinical Information – A Mixed Methods Usage Analysis

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Background and Purpose
The use of smartphone based medical education applications has increased exponentially over the last five years. [1] As the breadth of clinical knowledge required of trainee doctors, increases, working hours are reduced and training opportunities become increasingly difficult to find, many junior doctors are attracted to novel ways to support their clinical decision making and continuing medical education (CME). Medical education ‘apps’ can provide immediate access to up to date and accurate clinical information at the point of care, replacing traditional points of reference such as textbooks and desktop workstations. Trainee doctors’ clinical decision-making can be supported by rapid access to such accurate clinical information. [2] There are a large volume of applications available - however commercial content is often prohibitively expensive.[3]

Analysis of usage data from apps could be used to focus content and understand how doctors choose to utilise point of care information – allowing reinforcement of good practice in the most cost efficient manner.

Methodology
A commercial smartphone-app ‘DrCompanion’, was obtained with a subscription to a number of popular medical handbooks, digitised local guidelines, and the BNF. This app was then distributed free of charge to 150 Foundation trainees. Mixed method data capture was then performed utilising obtained anonymous usage data and metadata. This was interpreted by triangulation with thematic analysis of interviews and questionnaires.

Results
Uptake of the app was impressive - 76 doctors used the app once weekly or more, with up to 791 page-views in one day. Commercial content was accessed more than local guidelines. This may reflect challenges with content not designed for smartphones. A number of emergencies and critical care topics such as chest pain, DKA, and electrolyte abnormalities were accessed frequently at the point-of-care. A need for improved access to local guidelines was repeatedly noted in the interview process.

Discussion and Conclusions
The data proved our smartphone based point-of-care medical information app to be generally well received as a concept – junior doctors regularly accessed the app and their experiences were largely positive. Interviews with participants highlighted a need for improved integration of local guidelines and protocols. Using data from this study a business case was built to maintain the app subscription, at reduced cost, by focussing on most used content. Plans to develop the app with local guidelines and patient safety information are ongoing.

References
Students Leading the Way in Mobile Learning Innovation

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In 2013, the University of Leicester Department of Medical and Social Care needed to accommodate a dynamic new curriculum requiring quick updates. Printed workbooks were no longer the way forward. E-books were a possibility, but on what platform and how to make this work across a large cohort? The decision was made to give incoming undergraduates a full-size iPad. Students were instructed to download pdf workbooks from the VLE (Blackboard) onto their iPads, along with Notability and Dropbox, and bring their iPad to every class. Students responded by pioneering ways of studying far beyond the simple use of iPad-as-ereader. The results have been felt to be so successful that the intervention has been repeated this academic year.

But what kinds of learning has been enabled by this digital platform? What affordances of the iPad were valued and used by students? How can observations of students’ digitally-enabled learning help to inform future decisions that are pedagogically and practically sound? This presentation discusses our action research on these issues.

Method: Online surveys were administered three times during 2013/14 (N=125, 88, and 105 respectively) and so far once in 2014/15 (N=49), gathering quantitative and qualitative data. The surveys contained enough identical questions to generate ongoing longitudinal study. In addition, during one week in May 2014, students emailed simple statements of how they were studying, where, and with whom. Learning activities and how these were enabled by device affordances and apps were discovered in the results, grouped, and mapped onto Laurillard’s Conversational Framework of E-learning Technology (Laurillard, 2002) and Koole’s FRAME Model for Framing Mobile Learning (Koole, 2009), for practical and pedagogical consideration.

Results: Learning activities reported by and interpreted through these data fall generally into the following groupings:

• Active learning in lectures
• Annotating, organising learning materials
• Group work collation and development
• Locational freedom
• Handwriting & drawing
• Group study facilitated by Facebook groups
• Student-made quizzes for personal and group study

Implications: Results suggest rich learning situations are enabled by the use of iPads in unexpected ways. Therefore, more ambitious use of iPad affordances has been encouraged; these include quizzes for self-assessment in group work, student-led presentations in webinars, formal summative e-assessment, ebooks with contextual multimedia and quizzes, and more participatory learning with students collaborating within authentic communities of practice. (Wenger, 1998) The research continues.


Evaluation of a teaching skills course for general practice trainees

H Thampy
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**Background and Purpose**

There is increasing emphasis on all doctors developing a teaching role, cultivated from the trainee stage\(^1\). In keeping, the RCGP have incorporated teaching role development into the general practice (GP) training curriculum\(^2\). However, whilst hospital registrars are frequently involved in teaching activities, the same is not true of GP registrars\(^3\). Yet it is widely accepted that near-peer tutors (NPTs) offer multiple benefits. The NPT benefits through greater identification of their own learning needs whilst those they teach have an enhanced learning experience from being taught by someone closer in age and stage\(^4\). Furthermore, the use of NPTs in primary care is of increasing importance given the continuing shift of undergraduate medical education into the community setting. It is suggested however that GP trainees feel unprepared and lacking in the skills and knowledge in order to take on teaching activities.\(^5\)\(^6\) This presentation will describe emerging data evaluating the design and implementation of a teaching skills course for final-year GP trainees.

**Methodology**

Our medical school currently delivers a well-established and highly successful training programme (named PRIME\(^{GP}\)) for prospective qualified GP tutors wishing to offer student placements. This course content formed the basis of a modified version aimed at GP trainees (PRIME\(^{GPST}\)). Course design was further informed through exploratory scoping workshops with experienced GP trainers. This created two half-day interactive workshops which provide an overview of our medical school's undergraduate curriculum, the PBL process, principles of providing feedback and assessment methods. Crucially, trainees are encouraged to 'buy-in' to the idea of taking on teaching roles through tasks that help them identify the myriad benefits of serving as an NPT. Change theory is discussed to enhance trainees’ confidence when negotiating for increased teaching roles. Our postgraduate training partners have supported us in integrating the PRIME\(^{GPST}\) course into the multiple GP training schemes in our region. Delivery of these courses is currently ongoing. Immediate post-course questionnaire evaluation is being conducted utilising a mixture of Likert-type scales and free text comments.

**Results & Discussion**

Emerging results from both quantitative and qualitative analyses from the evaluation will be presented. Numerical analysis indicates a statistically significant rise in self-reported confidence scores on a number of teaching domains from pre- to post-workshop ratings. Free text comments also confirm that the course was well received by participants with stated intentions to change future practice. Further detailed evaluation results and our design/implementation strategy will be presented.

**References**

Exploring the Use of Innovative Video Analysis Software to Aid Reflective Practice of Medical Educators in their Continued Professional Development

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Background and Purpose
Since the early work of Donald Schon (1983)¹ there has been a growing interest in the importance of reflective practice in professional development and many clinicians now routinely incorporate reflection into their clinical work. Despite reflective practice also being “widely recognised as a crucial element in the professional growth of teachers” (Calderhead & Gates, 1993)² most clinicians are not similarly using reflective practice within their teaching roles. As the use of technology in education has grown in recent years there has been an interest in using video to facilitate teacher reflection, and more recently video annotation tools, such as Studiocode™, are starting to be used in schools to further analyse teacher performance yielding promising results³. Many studies have now shown that video playback can aid deeper reflection on teaching practices, help focus on specific teaching behaviours which need improvement, and increase confidence of teachers in their reflective decisions⁴. This study aims to investigate how Studiocode™ could be adapted to enhance medical educators’ reflective practice and explore their attitudes towards video analysis as a reflective tool within medical education.

Methodology
This is a qualitative study. Methods include the development of a unique coding system using the software package Studiocode™ which enables you to link video files of specific teaching instances to a timeline which can subsequently be analysed and used for reflection by the teacher. I have based the coding system on a combination of what is shown in the literature to be considered characteristics of effective teaching⁵ and the domains of validated teacher rating tools⁶. I plan to trial the software with volunteers teaching our postgraduate psychiatry core curriculum course, as well as colleagues undertaking their postgraduate certificate in medical education. Following reflection sessions with the volunteers I will conduct a semi-structured interview to explore their attitudes to being videotaped, perceived usefulness of the analysis, and whether this is something they would consider incorporating into their teaching practice.

Discussion and Conclusions
Teacher resistance has been shown as a barrier to using video analysis in reflective practice and relates to anxiety of watching oneself, feeling daunted by technology, and being considered time-consuming⁷. I predict that my study will prove this to be a simple, effective, and useful tool which medical educators will value. I believe it has the potential to not just improve teaching skills but to aid clinicians in developing a teaching portfolio of their practice useful for appraisal purposes and career progression.

References
Simulation Education Activity after attendance of Faculty Training Course: Barriers to involvement

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O Leng, North Tees and Hartlepool NHS Foundation Trust

Background and Purpose
Simulation Teaching’s theoretical promise is increasingly supported by an emerging evidence base demonstrating efficacy.\(^{(1)}\) The use of simulation education has been widely recommended by sources such as the WHO’s “Patient safety curriculum” \(^{(2)}\).

This adoption of simulation necessitates faculty with the skills to plan, deliver and debrief such teaching. North Tees and Hartlepool NHS Foundation Trust offer an ‘Introduction to Simulation’ Faculty Training course. This course has been delivered to 82 individuals – however many fail to progress to become active faculty members.

We aimed to (1) Gauge involvement in simulation after attendance on the faculty training course, and (2) Identify barriers that prevent greater involvement in simulation education. Issues that affect the development of a body of skilled simulation faculty appear very pertinent to medical educationalists more widely as simulation is increasingly embraced across the NHS and beyond.

Methodology
An anonymised online survey was created using ‘SurveyMonkey’. Staff who had completed the Introduction to Simulation received three messages to their Trust email account requesting they complete the anonymised survey.

Results
Twenty-one staff returned the survey. All respondents agreed or strongly agreed that ‘Simulation teaching is an effective teaching tool’, ‘The Introduction to Simulation course was useful’, and ‘Simulation teaching would be useful in my clinical area’. Yet 12/21 (57%) had participated in ≤1 simulation session after attending the faculty training course, and only 14/21 (67%) were planning involvement in simulation in the next 6 months. The principal barrier reported was time pressure, which were rated as significant by 19/20 respondents (95%). Then, there were difficulties in scheduling room bookings or simulation faculty assistance, reported as significant by 39% and 35% respectively. Two respondents reported that insufficient confidence in either scenario planning or debrief were significant barriers to participation.

Discussion and Conclusion
The survey confirmed that many attendees of our training course do not become active faculty members. This is despite attendees considering both the course and simulation education useful. Only a small minority consider their skills in delivering simulation were a significant barrier to their involvement. Rather, the major barriers to engagement related to logistical considerations. To address this, the Trust has appointed a Simulation Lead Tutor with dedicated time for simulation strategy, has reached agreement with the Executive board and clinical directors to facilitate staff contributions to simulation teaching, and has looked to increase flexibility through the use of in-situ simulation in clinical areas and investment in a portable camera system.

Quality assurance of undergraduate peer teaching: A student-led initiative

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Background
Peer teaching has been widely used in higher education for decades and it is arguably even more prevalent in undergraduate medicine. The advantages of peer teaching, for both teacher and learner, are well documented with improved cognitive congruence, confidence and increased motivation being just some of the perceived benefits. Furthermore, peer teaching has been shown to be comparable to faculty-led teaching and, with a recent meta-analysis finding no significant difference in knowledge or skill based outcomes for students taught by faculty or peers, it is clear that peer teaching has a place in modern medical education.

Method
Keele Medical Education Society (KMES) is a student run society, established in 2010, that aims to enhance the quality of peer teaching at Keele University Medical School. As a society, KMES organises and provides the majority of peer teaching at Keele and, over the past two years, has implemented a programme of activities to improve the quality of teaching delivered to students.

As part of this strategy, peer-tutors provide the KMES committee with lesson plans prior to teaching on which they receive feedback to help improve session quality. Learners are also invited to give feedback on teaching sessions via the use of anonymised feedback forms, the results of which are discussed at monthly meetings in order to identify areas for improvement. Furthermore, KMES provides joint student-staff-led training workshops for students wishing to become peer tutors and, most recently, has also developed a peer observation program. As part of peer observation, students who have attended a half-day training workshop, designed and delivered by KMES committee members, observe peer taught sessions and subsequently provide tutors with written and verbal feedback.

Results
At present, 46 students have attended tutor development workshops and 6 have attended peer observer training. In addition, 23 peer tutors have been observed and received feedback from peer observers during this academic year.

Discussion
Keele University Medical School has a strong culture of extra-curricular peer teaching that is autonomous from staff input. With a large number of students receiving teaching from peers, it is imperative that teaching standards are high to allow learners to benefit from peer-taught sessions. Although further research is needed to establish the efficacy of such measures, this description provides insight into a novel student-led initiative that aims to ensure peer teaching is delivered to the highest possible standard.

References
An Innovative International Model for Effective Patient Safety Training

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Introduction
‘Achieve Real change health’ is a voluntary organization of healthcare professionals with an interest and background in patient safety and inter-professional education in the UK who collaborate with healthcare providers in Sri Lanka, who have articulated a need for increased understanding of these subject areas. Sri Lanka has seen an increase in non-communicable diseases, resulting in patients needing more multi-professional care. The literature highlights the unmet training needs of the South Asian healthcare workforce, and advocates for improved investment in medical education. In addition to medical education, the importance of raising awareness of culture change, effective communication, collaboration and clinical leadership in patient safety in the UK, and in Sri Lanka have been recognized by the authors in their development of an innovative series of workshops.

Methods
A series of train the trainer style, interactive training workshops for multi-disciplinary healthcare professionals encompassing patient safety, communication skills, clinical leadership, collaborative healthcare (team-working & inter-professional education), and effective feedback, were held in institutions across Sri Lanka. Participants completed a 1-5 Likert scale pre-course and a post-course questionnaire with space for qualitative feedback. The post-course questionnaire assessed participants’ perceptions of their pre-course understanding of the subject areas (thereby identifying a knowledge deficit), and also how their understanding improved, following the workshop.

Results
There were 196 participants (16 doctors, 121 nurses, 39 allied health professionals, 3 others) across three sites; Tellipilai Hospital, Jaffna, Nawaloka and Lanka Hospitals, Colombo. 17 incomplete questionnaires were excluded from the study. Results indicate that participants identified a knowledge deficit in all subject areas, which the workshops effectively addressed, as evidenced by pre & post course understanding mean score improvements in each subject area evaluated. Overall, participants felt the workshop effectively addressed their learning needs (Mean Likert Scale Score 4.0), and examination of the qualitative feedback demonstrated a high level of learner awareness, satisfaction and engagement.

Conclusions
The authors have collaborated to design and successfully implement a series of innovative ‘train the trainer’ style workshops on patient safety and inter-professional education to multi-disciplinary healthcare professionals across Sri Lanka. This study demonstrates the utility of such a collaborative model, in delivering internationally evidenced training on patient safety, in a locally relevant context. The authors feel this model can be replicated in other parts of Sri Lanka and elsewhere.

References
1. www.achieverealchange.org


Inter-professional Education
Building the Foundations – Multidisciplinary Simulation for Foundation Programme Doctors and Nursing Staff at the Heart of Training

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The Foundation Programme curriculum states that trainees should engage with simulation training “to demonstrate practical, organisational and team working ability” as an “additional opportunity” to cover parts of the curriculum that are rarely encountered. In our experience of delivering simulation training to Foundation Doctors, simulation has a much more important and central role in promoting the important interactions between doctors and nurses and enhancing patient safety. This is also achieved in a way that is memorable and enjoyable for candidates.

Foundation Simulation days are held for all Foundation Doctors in the trust and attending each day are 3 FY1 doctors, 3 FY2 Doctors and 2 nurses, to provide a range of backgrounds and skill levels typically found in clinical practice. They are then exposed to 6 different clinical scenarios during the day with an emphasis on collaborative debriefing and group learning. From the respondents to post-course feedback, the mean overall satisfaction with the training experience was rated as 4.9 out of 5 on a Likert Scale (where 5 represents “very good” and 1 “very poor”). 100% of respondents felt that the training would positively impact their future practice with regards to the domains of multidisciplinary team working, clinical practice and patient safety. Candidates also found that certain elements could not have been taught by another modality:

- “MDT Sim is the only time we get to learn about working with nurses (apart from on the ward)! And it’s really, really useful for real life”
- “Great doing it with Nursing staff”
- “Skills for taking a more leadership role in managing unwell patients”
- “Importance of communicating with colleagues”
- “Listening to how [the doctors] manage certain situations and how to I as a nurse can contribute beneficially to this”

Using our experience from clinical incidents and attending patient safety meetings we have been able to make this training relevant and current to the issues faced in our trust. The multidisciplinary nature of our training programme provides additional learning and benefit to those involved. It is our belief that simulation should form part of the core training for doctors and nurses.

Physical Health Teaching sessions for nurses in the mental health setting

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Background and Purpose
Junior doctors working on inpatient wards within Avon and Wiltshire mental health partnership identified that nursing colleagues had little training about physical health care. It has been known for many years that physical health outcomes are much poorer in mental health patients. The nurses wished to have more knowledge in this area, which would directly impact the care of patients on the ward. Doctors also found that communication of nursing concerns over the phone was inconsistent making it difficult to assess the medical urgency of a situation. The objective of the project was to design a teaching programme to address this.

Methodology
A ‘Plan, Do, Study, Act’ methodology was used to implement short regular teaching sessions taught by junior doctors. Nurses identified areas of physical health care, which they wanted more knowledge in and we developed sessions accordingly. These ‘microteaching’ sessions were incorporated into nursing handovers and were adapted week-to-week following feedback. The main theme of these 15 minute sessions was to teach about basic physical health and included SBAR (situation, background, assessment and recommendation) technique and how to interpret physical observations. Written feedback on standardised forms was collected after each session. The project was originally trialled on inpatient mental health units at the Long- Fox Unit, Weston-Super Mare and then successfully implemented on other wards at Callington Road Hospital, Bristol.

Results
Excellent feedback was received from all preliminary sessions in all areas including relevance of subject, knowledge and enthusiasm of teachers and overall quality of sessions.

Discussion and Conclusions
As society deals with an ageing population mental health units have seen a rise in the numbers of physically unwell patients. Although some steps have been taken to address this including the introduction of early warning scores into mental health units there is still a need to educate mental health nurses in physical health. This programme has highlighted the desire and enthusiasm of mental health nurses to improve in this regard. The benefits of this method of informal teaching include teambuilding and improved communication between medical and nursing staff. Sessions are cost neutral to deliver and can be easily incorporated into the normal working day. This is vital for encouraging attendance and for successful implementation across multiple hospital sites. Future aims for the project include rolling out these teaching sessions across other mental health units in the Severn Deanery

References
1. Phelan, M., Stradins, L., Morrison, S. Physical health of people with severe mental illness. BMJ, 2001;322:443
Does learning in an inter-professional environment affect the likelihood of course attendees supervising an individual from another healthcare profession?

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Background and Purpose
The World Health Organisation in their Framework for ‘Action on Inter-professional Education and Collaborative Practice’ state that ‘effective inter-professional education enables effective collaborative practice’ (1).

Despite the benefits of Inter-Professional Learning (IPL), there have only been a handful of studies looking into inter-professional supervision or mentorship. One study conducted by Heidari (2) looking at senior nurses mentoring newly qualified Doctors showed improved working relationships, communication skills and job satisfaction amongst study participants. This highlights the importance of promoting inter-professional supervision and mentorship and investigating the best method to go about this.

The overall aim of this research is to investigate whether attendance at an inter-professional course on ‘Advancing Skills in Supervision and Mentorship’ affects the likelihood of course attendees supervising an individual from another healthcare profession. Attendees will also be questioned as to whether their perceptions of working within a multi-professional environment have changed.

Methodology
A self-completed and anonymous questionnaire has been chosen to collect the data for this study. A post-course questionnaire including open and closed questions and Likert scales was designed to investigate course attendee’s views on learning in an inter-professional environment. An online follow-up questionnaire will be sent six weeks following the course to all study participants looking into whether their practice and views have changed as a result of the inter-professional course.

Results
The results of the questionnaire will be analysed by looking at the frequency of responses to Likert scales and looking for common themes in open question responses. A questionnaire distributed following a pilot course with 6 attendees showed that all attendees agreed or strongly agreed that the inter-professional course will improve working relationships with other healthcare professionals and would make them more likely to supervise or mentor an inter-professional in the future.

Discussion and Conclusions
WHO research in 2008 (1) on international inter-professional education practices showed that study respondents experienced educational and health policy benefits after putting IPL into practice. It is hoped that course attendees who feel the course has enhanced their inter-personal and communication skills in an inter-professional environment will be more confident to take part in inter-professional supervision or mentorship. Subsequently, this will improve quality of care and increase job satisfaction as set out in The Centre for the Advancement of Inter-professional Education’s (CAIPE) vision for IPL (3).

References
Inter Professional Learning: A horizontal approach

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Inter Professional Learning (IPL) forms an important part of the undergraduate MBBS UCLan curriculum and is a General Medical Council requirement for undergraduate medical training. An innovative approach to IPL has been developed with colleagues from the service user group and School of Health UCLan. The poster will describe its development and proposed delivery in year 1 of the UCLan MBBS programme, Adult Nursing, Children's Nursing, Paramedic, Midwifery and Community practitioner programmes in collaboration with UCLan's School of Health's service user group (COMENSUS).

The underpinning ethos for the programme is based on the IPL definition offered by Centre for Advancement of Interprofessional Education (CAIPE) "Interprofessional Education occurs when two or more professions learn with, from and about each other to improve collaboration and the quality of care". Therefore this IPL opportunity is focused on learning from each other and not just upon learning in a shared space. The pedagogic theory which underpins this draws on elements of social learning theory and work by Wenger and Lave on ‘communities of practice’ and the notion of situated learning. The approach seeks to situate and contextualise learning via the use of simulations and case studies.

The approach to IPL acknowledges and seeks to enhance student learning from the Problem Based learning approach used in year 1 of the MBBS. Each of the seven IPL sessions uses an innovative approach incorporating 3 ‘flipped classroom’ sessions, an actor and service user group led session, and a final flipped classroom session for guided reflective work. The Year 1 MBBS cohort and an equal number of School of Health students will attend each IPL session and each session is recorded to allow other students to access resources and attendees the opportunity to revisit learning. A learning model is proposed that suggests how transformation of learning takes place and help structure students’ reflective practice.

References:
2. Centre for Advancement of Interprofessional Education CAIPE (http://www.caipe.org.uk)
A novel simulation prescribing masterclass for medical and non-medical prescribers

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Background and Purpose
Protecting patients through safe, effective prescribing practice is central to sustaining health. Prescribing legislation currently permits doctors, nurses, pharmacists, physiotherapists and podiatrists to independently prescribe. Errors, up to 10% for doctors and 6.1% for nurses, are reported¹. It is suggested that inter-professional collaboration and respect for different professions distinct contribution to prescribing may result in safer prescribing practice². This is reflected in professional prescribing standards and the National Prescribing Centre’s single competency framework.³,⁴,⁵ A problem solving case based approach to learning allows students to work collaboratively with other professions to solve complex prescribing dilemmas. Inter-professional prescribing education is evident in nurse, midwife and non-medical allied health professional (NMAHP) programmes with doctors and pharmacists supporting the development of prescribing competence in practice. However, in Scotland there is currently no formal inter-professional prescribing education between NMAHP, doctors (or medical students) and pharmacists.

Methodology
This project aims to develop, pilot and test the feasibility of a simulated inter-professional prescribing masterclass for NMAHPs, final year medical students and pharmacists in March 2015. An expert advisory group will be convened to develop and oversee the project and two pilot events will be undertaken. Firstly, NMAHPs will be invited to join in with the final year medical students ward simulation exercise. Secondly, using evidenced based guidelines, a small-scale, specially designed simulated prescribing exercise will be run and evaluated. Acknowledging that students are essential partners in curriculum design, the evaluation will include the use of validated, objective measures of perceptions and self-efficacy, as well as recording the simulation exercises and in-depth interviews with participants focusing on acceptability and the role these activities will play in preparing students for practice. The results will be analysed and used to refine and expand the masterclass for a larger pilot later in the year.

Discussion and Conclusion
The NHS is changing. Roles, including prescribing, that were traditionally undertaken by medically trained staff are increasingly being performed by other health professionals in a multi-disciplinary team. It is essential that educational institutions develop opportunities for students to learn and practice these skills together, developing an understanding and respect for differing educational backgrounds. This projects sets out to ensure that this is done with a sound evidence base and full evaluation to produce a sustainable educational experience that can be implemented nationally and potentially internationally.

References
Introducing Inter-Professional Learning (IPL) Comprehensive Geriatric Assessment (CGA) Simulation  

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Background  
Comprehensive Geriatric Assessment is an evidence based process for managing an older person with frailty in order to develop a co-ordinated plan for treatment and follow up.¹ ² 
Simulation is increasingly used to teach students in healthcare disciplines in the UK but has traditionally focussed on high fidelity simulation and acute skills ³⁴⁵⁶. A pilot project was carried out implementing an Inter-professional (IPL) CGA simulation teaching session, that would determine if it is an acceptable and feasible method of introducing the concept of CGA and multidisciplinary working.  

Methods  
Phase 1 involved geriatric medicine clinical students. Four scenarios (urinary incontinence, elder abuse, confusion and dysphasia) were set involving trained simulated patients in a mock ward environment. Orientation included a podcast introducing the concept of CGA. A ward based simulation followed where students were expected to apply the CGA concept for each of the scenarios. The session concluded with a detailed debrief. Evaluation was carried out immediately and following the three week attachment. Successful feedback led to development to include 2nd or 3rd year undergraduate nursing students. Using the same scenarios, the nursing students completed a 5 minute initial assessment, followed by a handover to medical students. The group was then required to work collectively to assess their patient and develop a problem list and management plan using the concept of CGA. Groups consisted of 1 nursing student with 2-3 medical students. The teams rotated round all 4 patients, each rotation lasting 20 minutes. During debrief students discussed their knowledge, management and team working issues. There was a 50:50 split between the 2 elements of the debrief.  

Results: Phase 1 Medical Students  
Students perceived knowledge of CGA improved from 62% to 94% (n=61); over 80% felt their knowledge of the 4 clinical conditions had improved. Over 60% indicated they used the knowledge and skills acquired during simulation throughout their attachment.  

Phase 2  
Perceived CGA knowledge improved in both groups (medical: 64% to 95% (n=22); nursing 40% to 80% (n=6)). 95% of medical students felt their knowledge of the 4 clinical conditions had improved but there was no perceived knowledge gain for the nursing students. Qualitative evaluation revealed students from both professions felt it to be a beneficial learning experience.  

Discussion  
This simulated approach provided multidisciplinary team experience enabling students to improve knowledge, attitudes and skills regarding inter-disciplinary working and the concept of CGA.  

References  
Multidisciplinary in-situ simulation in Acute Medicine of the Elderly wards, resulted in improved confidence in patient management, and increased awareness of multidisciplinary team roles, as well as identifying remediable areas of risk.

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Background and Aims
The Francis report highlights the importance of healthcare organisations undertaking measures to create learning environments, support effective teamwork and improve patient safety. The World Health Organisation recognises that simulation facilitates learning in a supportive environment, allowing errors to be made without patient harm. This encourages evaluation of practice and system errors with a multidisciplinary team (MDT) approach. Furthermore, in-situ simulation, whereby training is conducted in actual patient care units, can be used to identify and evaluate human factors predisposing to error. Medicine of the Elderly (MOE) consultants at Royal Infirmary of Edinburgh identified management of falls, delirium and hypoglycaemia as areas of mortality and morbidity. We designed and introduced in-situ simulation MDT training to address this – the first of its kind in the unit – with the aim to improve patient safety by:
1. Identifying and evaluating human factors predisposing to error,
2. Improving confidence in management of falls, delirium and hypoglycaemia,
3. Providing MDT training promoting effective teamwork.

Methods
The scenarios are in keeping with departmental protocols and were delivered on MOE wards. We have run two sessions with a further three planned. We devised:
1. Post session feedback questionnaires to assess immediate benefit and also long-term application of learning.
2. Management checklists with time logs to assess whether key steps in management are achieved, and identify factors contributing to error.

Information will be disseminated post sessions at departmental meetings, and via the MOE clinical director and charge nurses to facilitate change.

Preliminary Results
Ten participants – clinical support workers, nurses and trainee doctors – attended the first two sessions. One set of data is missing. Of the remainder, 100% reported:
1. Increased confidence in management (measured on a 10-point Likert scale) of hypoglycaemia (mean increase of 1.9), falls (mean increase of 1.0), and delirium (mean increase of 1.4).
2. Improved awareness of MDT roles, engendering better team working and communication

We also identified factors contributing to risk:
1. Incorrectly stocked hypo-boxes and cardiac arrest trolleys
2. Poor awareness of location of drugs, equipment, and local management protocols
3. Incorrect use and failure of moving and handling equipment

Conclusions
This project has identified systems errors; improved clinical management; and strengthened team dynamics. We envisage the dissemination of information in the unit, and future findings will show MDT in-situ simulation as an effective patient safety intervention.

References:
The Effect of an In-Situ High Fidelity Simulation Education Program on Management of Community Acquired Pneumonia

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Background and Purpose
Optimisation of community acquired pneumonia (CAP) management is a priority for North Tees and Hartlepool NHS Foundation Trust. An in-situ simulation education intervention has been associated with impressive improvements in sepsis management in an emergency department setting.\(^1\) In-situ simulation situates learning within the context of the clinical environment and the wider multi-professional team. Our study will aim to assess the impact of a high fidelity in-situ simulation educational intervention upon the management of CAP in a medical admissions unit (MAU).

Methodology
An in-situ simulation scenario will be delivered in the MAU twice weekly for eight weeks. This will utilise a Laedel 3G SimMan mannequin to portray a patient with symptoms, signs, and investigation results consistent with CAP. MAU staff will be tasked with managing the simulated patient in a realistic manner. Involved staff will then engage in a facilitated reflective debrief. This will focus on the optimal care of CAP, and how to achieve this.

The intervention’s impact will be assessed through:
1) An evaluation form will ask participants to list any changes to their practice that they intend to make following the session
2) A semi-structured qualitative interview occurring ~4 weeks after the teaching session. This will focus on changes in attitudes towards CAP, and changes in behaviours during the management of CAP. Interview responses will undergo thematic analysis.
3) Audits of both MAU and individual clinician compliance with BTS guideline
4) Monitoring of the mortality rate and length of stay for patients admitted with CAP.

The National Institute for Health Research’s online ethics tool determined that ethical approval was not required for this project. Local service evaluation approval will be granted before project commencement.

Results
The study will be completed by May 2015. Results will be available to present in conference.

Discussion
This project will look to evidence the impact of a high frequency in-situ simulation intervention upon both clinician behaviour and real clinical outcomes. The audit-based outcomes are vulnerable to confounding factors, and so we will be looking for a strong temporal association and corroborative evidence of the intervention’s impact. The utilisation of the qualitative interview and the evaluation questionnaire will help evidence whether any observed change in practice is likely to be attributable to the educational intervention. This use of corroborative evaluation will help provide stronger evidence of the impact of in-situ simulation on clinician behaviour and clinical outcomes.

1. Mardon J. SEPSIS 6 BUNDLE DELIVERY IN THE EMERGENCY DEPARTMENT. SIMULATION AND VIDEO FEEDBACK ENABLES REAL QUALITY IMPROVEMENT
Is there a Need for Inter-Professional Education at SaTH? A Pilot Session.

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Background and Purpose
Inter-professional education (IPE) occurs when students from two or more professions learn about, from and with each other” (WHO, 2010). The World Health Organisation goes on to state that collaborative practice strengthens health systems and improves health outcomes. The GMC (Barr, 2003), RCN (2006) and DoH (2002) have all discussed the merits of inter-professional education in their literature and studies have indicated that active, experiential learning facilitates this (D’Eon, 2005), of which simulation is an example. The aim of the pilot session was to gather information regarding if there was a need to establish an IPE programme at Shrewsbury and Telford Hospitals (SaTH) and what effect participants believed this would have on patient care. Further information was gathered as to if simulation was an appropriate tool for an IPE programme.

Methodology
There were 11 participants, five of whom were foundation year 1 doctors on rotation in SaTH, four band 5 nurses and two band 6 nurses. They all attended on a voluntary basis. The day consisted of a mixture of small group work, lectures and simulation scenarios. The simulation scenarios were common clinical presentations that may be seen on the acute medical unit. Intended learning outcomes included teamwork, communication and situational awareness as well as specific outcomes related to each scenario. Information was obtained as to what the participants believed were the challenges faced working in an interprofessional team on the ward and feedback as to how they believed the session would influence future patient care.

Results
All participants believed that the session was beneficial and that it would help them to care for patients better in the future. When asked to score the usefulness of the session out of 10 the average score was 9.5.

Discussion and Conclusions
The feedback received from the participants was that using simulation would benefit patient care. They also believed that is had given them a greater understanding of the challenges that other healthcare professionals face.

References
Female circumcision: A study of health education amongst communities at risk and professional groups.

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Background and Purpose
Greater Manchester is recognised as one of the six UK hotspots for FGM practice (1). Up to 2,000 girls are believed to be at risk of FGM there. Between 100-140 million girls and women worldwide are estimated to have undergone FGM and more than 3 million girls are at risk of the practice each year in Africa alone (2).

The question of whether education is effective to support FGM survivors and prevent this practice in the future is under-researched. The results of this study will direct efficient use of resources and attract funding to help FGM survivors and support agencies. It aims to inform policy for education and produce materials accessible to lay people, agencies available for local support in the voluntary sector, and for teaching of health professionals and medical students.

Methodology
The study uses a mixed approach, combining a review of the relevant literature with qualitative methods. The study comprises recorded focus groups: one with women only; another with young people, male and female, aged 18-25; and a group of professionals involved in child and family protection, such as police officers, social workers, teachers and doctors. Guided topics were around perceptions of the currently available education on this topic, and reflections on how this may be improved.

Results
A summary of the education currently available with reference to the contemporary literature will be presented. A narrative account of the themes will be used to illustrate the preliminary results from the study.

Discussion and Conclusions
This study explores the extent, inclusivity and effectiveness of engagement and education around the dangers of female genital mutilation (FGM) for communities at risk and for professionals.

A medical student wished to undertake a useful local project in an area under-represented by existing research to the benefit of a socially disadvantaged group. This enabled the university to implement its Social Responsibility strategy at a student level. The choice of project helped the student to focus on where they could act to make tangible differences prior to graduation. It allowed them opportunities to work with a range of NGOs and consider the role of the doctor as a community advocate.

Inter-professional simulation training in diabetes & endocrinology: A pilot programme – learning from adverse incidents

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Background
Inter-professional education is promoted by the GMC and the collaborative approach is viewed essential in patient care.1 Simulation based training enables acquisition of knowledge, skills and attitudes in a safe environment without compromising patient safety.2 Inter-professional simulation training showed increased positive effects on self-efficacy for nurses and doctors.3 With the increased prevalence of diabetes, all doctors, regardless of specialty, will need to manage diabetic patients. A national survey showed a lack of confidence in their management.4 There are currently no diabetes and endocrine emergencies simulation training programmes, let alone in a multi-professional setting. Reporting adverse incidents is encouraged to improve learning from errors, which often involve human factors. Simulation training can be used as a tool to learn from these incidents that lead to patient harm and instil change in practice.

Aim
To improve recognition and management of diabetes and endocrine emergencies and to develop inter-professionalism, team-work, leadership and communication skills.

Methodology
A pilot full-day multi-professional high-fidelity simulation session was conducted in the simulation centre at a university teaching hospital. Scripts, derived from real adverse incidents, for seven emergent scenarios were based on previous adverse incidents: severe hypoglycaemia (SH), diabetic ketoacidosis (DKA), hyperosmolar hyperglycaemic state (HHS), pituitary apoplexy (PA), hyperthyroid crisis (HC), hypoadrenal crisis (AC) and diabetes insipidus (DI). Training was offered to nurses and doctors of all grades. A trained ‘nurse plant’ was utilised to guide development of the clinical scenario. Remaining candidates observed the simulation in another area via live video streaming. The manikin’s vital signs were remotely controlled and changed depending on interventions performed. Debriefing5 occurred after each scenario. Evaluations were completed before and after the course.

Results
Participants included nurses and doctors (50% nurses). On the Likert scale (1 to 6), there was increased confidence in managing SH (average pre-course 3.7 vs post-course 5); HHS (2.8 vs 5); PA (2 vs 3.8); HC (2.3 vs 3.3); AC (2.5 vs 4.3); and DI (3 vs 5.5). All provided positive feedback regarding multi-professional training, teamwork (5.8), improved knowledge (5.8), voicing concerns during crisis (4.5 vs 5.8), leadership (4.5 vs 5.8), valuable training tool (5.8) and overall enjoyment (5.8).

Conclusions
Inter-professional simulation sessions benefit patients, nurses and doctors and more are required. Encompassing adverse incidents in simulation training is a pro-active approach to learning from mistakes and improving patient safety. With no other centres offering this diabetes and endocrinology simulation training, this is certainly a novel training programme.

References
Foundation QI Education- Developing a web of expertise

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The foundation curriculum of 2012 (updated 2014)\(^1\) recognises that foundation doctors need to have training about systems of quality improvement as well as having patient safety as a vertical theme throughout the whole curriculum.

In the Severn Postgraduate Education Health Education England (The Deanery) foundation doctor QI education programmes have been introduced over 5 years to all acute hospital trusts. Starting with one Trust with enthusiastic improvement experts, the programme is now in all acute hospital Trusts in the Deanery.

The F1 doctors choose their own quality improvement projects as they start working in busy acute Trusts focussing on how they can change processes and systems, even in a small way, to improve patient safety. This method of learning by doing was noted to be effective in the research scan by the Health Foundation in 2011 “Involving junior doctors in quality improvement.”\(^2\)

The junior doctors are allocated a senior facilitator and are given informal teaching on the QI methodology and wider patient safety issues. At the end of the academic year, they present their projects to the Trust board and often present at other safety and specialist conferences. Lasting changes have been made in Trusts by these junior doctors.

It was recognised by the Deanery that it would be beneficial to link the various programmes in the region. Supported by a Deanery Foundation QI education lead, this linkage allows sharing of ideas and expertise for development of the programme. The Trust QI education leads meet face-to-face regularly and are in contact electronically forming a web of expertise. Examples of benefits of this linkage include the addition of a wash-up meeting at the end of the academic year and development of F2 programmes led by the trained junior doctors as they move to different Trusts.

The Trust leads are also developing their expertise, being helped by local acknowledged experts in QI, and are becoming involved in Trust patient safety work away from the education programme. This allows education about QI to become embedded in the Trust’s culture. Ongoing linkage of the leaders in their web of expertise could therefore help many aspects of safety.

These experts present the programme to a wider audience and this has allowed the spreading of the concept of QI education for F1s to adjacent Deaneries. The junior doctors themselves move onwards with their careers and take their enthusiasm and expertise with them to other healthcare organisations.


Does our training scheme meet the needs of trainees –the trainee perspective?

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The Leeds/Bradford Radiology Academy uses a training model with weekly academy based teaching during the first 3 years and clinical training based in hospital departments throughout West Yorkshire. The scheme currently consists of 75 trainees and whilst trainee representatives sit on relevant educational boards and forums exist for trainees to air their views, no large scale, anonymous assessment of trainees’ opinions of the scheme and their training has been carried out. We performed a survey of all current trainees in order to assess whether educational needs were being adequately met. A predominantly open online questionnaire with free text questions was devised and distributed to all current trainees with 55 responses obtained. Overall we found the registrar body to be satisfied with the quality of their training but the majority felt that there is room for improvement with clear recurrent themes. One example of an area that trainees felt could be improved included opportunities for viva and the stage of training that this occurs. Many trainees commented that they felt they would have benefitted from practicing viva technique early in their training in order to help them perform better in the final examination. These concerns have been addressed by the dissemination of this information to the consultants and a more formal, senior trainee led, examination style teaching programme is being trialled currently. Further issues raised included supervision of plain film reporting, speciality versus general training and effective use of weekly academy teaching days.

The results of this survey provide evidence to implement positive changes to the radiology academy and reinforce to consultant trainers that trainees are generally satisfied with current training. All trainees have been given a forum to express their opinions anonymously and the results of discussions between representatives of the consultant and registrar bodies along with any plans for future improvements have been fed back to the trainees verbally and via email. Whilst not all issues can be addressed, the hope is that by addressing issues affecting the majority of trainees or providing an explanation for why certain areas are presently run as they are, trainees will feel empowered to engage with the consultant body to shape their training. Once changes have been embedded trainees will be surveyed to ensure they have been appropriately addressed. The aim is that through trainee and trainer collaboration the standard of training and therefore the standard of trainees will improve.
Core versus ACCS Anaesthesia training: identification and integration with the specialty

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Background

Training in Anaesthesia can occur via two routes: Core Anaesthesia training or the Acute Care Common Stem (ACCS) pathway, a route into anaesthesia which increases exposure to acute specialties but which prolongs training by an additional year. The ACCS route may increase pressure to attain required anaesthetic competencies with reduced total anaesthesia exposure compared to core training [1]. The aim of this study was to explore the experiences and perceptions of newly-appointed trainees in both training pathways.

Methodology

Grounded in social constructivism, this study utilised semi-structured telephone interviews to explore trainee views of their experiences to date, particularly in terms of identification and integration with anaesthesia. After obtaining the necessary ethical approvals, trainees who commenced training in Scotland in August 2014 (n=68) were contacted by email from The Scotland Deanery with an invitation to participate in the study. Interview data were analysed using a framework approach to identify themes.

Results

Thirteen qualitative telephone interviews were carried out in Autumn 2014. Interviewees represented all 4 regions within The Scotland Deanery and comprised seven (54%) ACCS and six (46%) core anaesthesia trainees. ACCS trainees did not identify with anaesthesia or indeed with any of the specialties in their programme (“You are a wanderer in specialties”). They were perceived as “different” and as being treated differently from core anaesthesia trainees (“the people who are on ACCS kind of get forgotten a little bit”). Core trainees who started together felt bonded as a group whereas ACCS trainees were not part of this group (“I couldn’t tell you the name of one core trainee. There’s no crossover”) nor did they seem to have bonded as an ACCS group, and thus felt isolated. Data will be presented in more detail at the ASM.

Discussion

This study suggests that those who enter anaesthesia via the ACCS route can feel excluded from the specialty and may not fully integrate or associate with it during the early phases of training. The resultant feelings of isolation may influence retention of ACCS anaesthesia trainees. Further research is required to explore this in more detail.

Factors influencing choice of foundation school – Location, location, location

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Background and purpose:
The Foundation Programme is the first 2-years of U.K post-graduate medical training consisting of a training programme with six 4-monthly specialities. Recruitment for Foundation Schools is an annual national process in which applicants rank their choice of deanery and are accordingly given their rotations depending on the overall score they obtain on their online application. Since the introduction of the Foundation Programme in 2005, an independent multi-regional analysis into factors influencing medical students’ choice of foundation school has yet to be performed1.

Methodology:
An online questionnaire tool was sent to final-year medical students of 9 U.K medical schools (Edinburgh, Swansea, Imperial, Peninsula, Leicester, Keele, Sheffield, Liverpool and Glasgow). All students had already applied to the 2014 Foundation Programme recruitment process and awaiting the outcome of their application. A list of 12 factors that can influence choice of foundation school were asked to be ranked in a 5 point Likert scale. These 12 factors were;
- Location - Recommendation from others - Partner - Choice of specialties in FY1
- Financial - Undergraduate experience - Family - Availability of academic post
- Friends - Perceived competitiveness - Prestige - Choice of specialties in FY2-
In addition all students were asked to rank the top factor which influenced their choice of Foundation School.

Results:
In total we received a response from 361 medical students (response rate =17.3%). 97.2% of students either strongly agreed or agreed that location was a factor influencing their choice of foundation school. >50% of respondents either strongly agreed or agreed that undergraduate experience (67.6%), family (62.3%), recommendations (62.3%), friends (55.4%), perceived competitiveness (52.9%) and partner (52.1%) influenced their choice of foundation school. When asked to give the single most important factor when embarking on their choice of foundation training school, 44% chose location with 26% choosing partner, family or friends.

Discussion:
This is the first independent multi-centre study to investigate factors influencing choice of foundation school for final-year U.K medical students. In the early years of training, though there are numerous factors at play in the choice of a particular training programme, it still is location that is paramount. The Foundation Programme as well as postgraduate training beyond is becoming increasingly competitive. It is imperative that medical students have realistic goals and get off on the right footing to achieve their aspirations. The information from our study can be used to counsel medical students appropriately toward prospects, expectations and meeting their goals.

Are there indicators associated with trainee doctors who have experienced difficulties in their postgraduate medical training? A systematic review of the literature

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Background and Purpose
Specialty training is a crucial time for trainee doctors, with the development of clinical skills and independence as a doctor whilst simultaneously providing patient care. However as levels of responsibility and competency increase\(^\text{(1)}\), levels of stress also increase\(^\text{(2,3)}\). Research shows that stress in a doctor can have negative effects on patient care\(^\text{(4)}\) and impact on a trainee’s career and health\(^\text{(5)}\). The purpose of this review was to find what indicators in the literature may be predictive of difficulties experienced by doctors in training.

Methodology
Papers were identified by searching MEDLINE and EMBASE databases. Limitations put on the databases included; English language only, dates between 2000 - August 2013. The initial search yielded n= 10875 articles. Once articles had been read and sorted by relevance of their title n=140. Abstracts were read and excluded if they did not fit with the exclusion/inclusion criteria n=72. Full articles n=68 were read, n=50 were disregarded. The remaining papers 18 plus 5 which were found through hand searches yielded a total of n=23 papers. These were read with an eye to quality and categorized to assess the quality of the papers and relevance and coded using a thematic approach.

Results
There were eight main indicators of doctors who may experience difficulties during their training; being an International Medical Graduate and making the transition to the UK, America or Canada; gender; age; personality traits; background; ethnicity and financial issues. External factors such as an organisations culture can also act as a contributing factor. Potential interventions highlighted in the literature were also mapped onto the indicators.

Discussion and Conclusions
This review identifies indicators that are associated with doctors in difficulty during their postgraduate medical training. They can inform our thinking about which trainee’s may need support or interventions and when they should be put in place so as to avoid them becoming a lasting concern.

References
A support teaching programme for de implementation of the curricular reform in a physiotherapy career.

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Background and Purpose
The new competence based curriculum model is being introduced in all educational institutions. The problem that was observed is that the teacher are not well-trained to apply in the classroom what the model propose. There for it is necessary design new models of training to support teacher in this process of educational transformation. A support teaching programme was design based in CIPP model1 and micro teaching 2,3, in response to the needs of the physiotherapy career, in a two years process. The aim of this study is design a support teaching programme for the implementation of the curricular reform in a physiotherapy career.

Methodology
Cualitative investigation, action research project. Three instuments were used for the data collection, semi-strutured interview, classroom and clinical observation, field notes. There were 20 teacher who particpated in the project. Analysis Plan were descriptive and content analysis.

Results
Two categories described from the results, educational capsules, in wich three aspects where relevant, expectative (80%), contribution ( 82,7%) and planning of the capsules ( 92,9%). The other category corresponds to the accompaniment in wich teachers belived that this instance contribuite in curricular application (50%), subsequent performance (64,3%) and teaching re-evaluation (35,7%).

Discussion and Conclusions
The new curriculums force educational institutions adapt to the new needs, being essential, to create new innovative training models for teachers, that suit the teachers requirements and enhance the accompaniment in the classroom or clinical settings 4,5.

References
Assessing the impact on safety culture of introducing a multi-professional team training day to a gynaecology unit.

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Objectives
Team training is embedded into the obstetrics department at North Bristol NHS Trust and there is evidence that it improves care and outcomes\textsuperscript{1-4}. A recent study has also shown that implementing team training on general surgical wards within the same hospital, using the same model of on-site multi-professional drills for all staff, can improve safety culture beyond maternity\textsuperscript{5}. The objective of this study was to determine whether the introduction of a multi-professional team training day, based on the local obstetric model, would also improve safety culture in our gynaecology unit.

Method
This interrupted time-series study evaluated the impact of introducing multi-professional training for all doctors, nurses and HCAs working regularly on the gynaecology unit. Two sessions ran with all staff encouraged to register to attend. Safety culture was measured using an adapted version of the validated (Sexton) ‘Safety Attitudes Questionnaire’\textsuperscript{6}. 42 (82\%) of eligible staff completed the questionnaire before the introduction of training and 30 (67\%) completed it 14 months later.

Results
The baseline scores before implementation of training were lower than those seen in several other studies looking at safety culture, including those of our adjoining maternity unit. It was much more difficult to establish training on the gynaecology ward, despite it being adjoined to a unit with strong track record of training and international reputation for impact on outcomes. After training, there was large improvement in scores for safety climate (62.41 pre-training to 66.51 post-training) and job satisfaction (57.71 pre-training to 63.41 post-training).

Conclusions
Low baseline safety climate scores in our gynaecology unit coincided with difficulty in establishing training. We encountered several challenges, including the cancellation of days due to staff being unable to be released to attend. It is possible that those wards that need training the most, because of poor safety culture, are also the ones where training is most difficult to establish. Now that we know that multi-professional training works, we need to understand how to address the barriers to getting it started.

References
The road to becoming medical registrars – a pilot study of the impact of an Intensive Care week on the current Core Medical Trainees: a District General Hospital (DGH) perspective (work ongoing)

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Background and Purpose
In a recent Royal College of Physicians (RCP) survey 44% of Core medical Trainees (CMTs) believed that their training program poorly prepares them for the role of medical registrar\(^1\). A separate RCP report\(^2\) also highlights the rising challenges the medical registrar faces in an increasingly pressurised NHS. Their role encompasses independently and competently leading acute medical takes, whilst managing acutely unwell inpatients, particularly at night. Professional communication with intensive care unit (ITU) colleagues is integral to this work. Additionally, it is widely accepted that many CMTs have difficulty obtaining opportunities for practical procedures, many of which are part of the GMC-approved curriculum\(^1,^3\). Applying the experimental learning theory\(^4\), we are conducting a pilot study to assess the usefulness of an experiential ITU week for 10 CMTs in a DGH setting. We aim to integrate focused experiential and educational interventions in intensive care medicine for CMT trainees locally, and potentially nationally.

Methodology
This is a pilot action research project. Methods consist of trainee questionnaires including qualitative and quantitative data on perceptions of confidence, competence and experience relating to managing and referring patients to ITU, as well as practical procedures. We will undertake semi-structured interviews with ITU consultants. Applying the adult learning principle\(^5\), we will conduct a focus group with CMTs to explore current attitudes and practices relating to the management and referral of unwell patients and expectations of knowledge among medical registrars. Questionnaires were developed through collaboration with ITU and medical consultants. Re-evaluation of trainees’ experiences and perceptions following their ITU week will facilitate clear comparison and development of suitable interventions.

Results
Results from the baseline questionnaire survey, focus group and semi-structured interviews will be presented, as well as resulting experiential and educational initiatives.

Discussion and Conclusions
Preliminary results demonstrate greater understanding of organ support amongst CMTs. Both an increase in trainee confidence relating to making ITU referrals and in numbers of procedures performed has been observed. We predict that the ITU week will prove beneficial in improving readiness for the imminent challenges of becoming a medical registrar.

Following positive feedback of the ITU week, we will consider applying the initiative across Barts Health Trust, and organising a focused one-day workshop for CMTs providing relevant structured teaching on ITU and safe procedural skill opportunities. A collaborative approach with trainees, ITU and medicine senior clinicians will be adopted with continual reevaluation to ensure an iterative approach is heeded.

References
4. Experiential Learning Theory; Kolb,A; Alice Y. 2012; Springer US; 978-1-4419-1427-9
Exploring the use of play as a means of adult education: Making management education manageable

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Background and Purpose
The use of problem-based learning has been shown to be highly beneficial in certain learning environments by stimulating higher-level thinking\(^1\). The use of specific tasks to engage the learner into reasoned problem solving and scenario management has brought huge educational benefits through simulation training and, more recently, the use of technical games in surgical training\(^1\). The latter brings a competitive element that has been shown to engage the learner more and encourage them to invest more in the learning of key skills\(^1\). Some papers have tried to extrapolate this success into the use of games and, though most reviews show mixed results, there are notable positive outcomes\(^2\). The literature also indicates play has comparable learning outcomes when equaled with standard didactic lectures\(^4\).

We propose the use of a board game to demonstrate key concepts and issues underlying departmental management decision making to senior trainees.

Methodology
A cross-sectional methodology will assess the value of using play (specifically a board game format) as a means of adult education. The session itself will involve small group (n=4-8) play involving a board game designed by the authors. The game is themed as to deliver learning on clinical management. Players take on the fictional role of a clinical director faced with providing a credible departmental service in the face of budgetary restriction. On moving around the board the players must decide whether or not to part or completely close departments through structured deliberative reasoning. In addition, themed chance cards add or relieve financial burden. Conclusion of the session enables groups to feedback their unique outcomes and reasoning, to the larger group.

Results
Data collection will be achieved through participant feedback in the form of a questionnaire survey and informal interview. The focus will be students’ perception of the teaching aid, their awareness of key management issues, confidence in their decision making and whether or not they would recommend this game to other senior trainees. Data will be translated into quantitative data and analysed for significance.

Discussion and Conclusions
Interaction and stimulation are central to both play theory and the learning process\(^5\). It therefore seems of intrinsic utility to combine both theories and means. Furthermore, play can form a means of assessment\(^6\). However, the implications of play as methodology for adult learning is yet to be fully evaluated and explored. In conclusion, play offers an exciting and potentially powerful tool in adult education.

References
Improving the Fidelity of Postgraduate Simulation Training through Collaboration with Trainee Media and Theatrical Make-up Artists

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Background
Over the last 6 years, the Postgraduate Medical Education Department at North Bristol NHS Trust has developed a simulation training programme for Foundation Doctors. The simulation sessions focus on the first fifteen minutes of managing an acutely unwell patient. The teaching focuses on developing clinical skills, but also addressing the human factors that influence the doctors’ performance in these situations. High fidelity medical simulations are regarded as educationally effective. However, feedback from these sessions suggested the realism was one of the weaker aspects of the teaching. Doctors’ reported that being unable to pick up on visual cues, available in clinical practice, made the scenarios feel more artificial. In addition to this, the faculty observed that doctors’ were interacting infrequently with the simulated patients. Improving physical fidelity of scenarios often incurs increased cost and this should be balanced against the improvement to the teaching. The aim of this project is to improve the physical and functional fidelity of our simulation training. This would be achieved by introducing videos into the scenarios, which give doctors’ the visual stimulus that influence their decision-making in clinical practice. In the production of this teaching material the Postgraduate Medical Education Team collaborated with trainee make-up artists from a local college.

Method
Four scenarios were selected to be used in this project. Medical faculty coordinated with the college to assign scenarios to trainees, with an interest in theatrical and media make-up. The trainees were tasked with recreating the appearance of the acutely unwell patient, in each scenario. Volunteer actors were recruited to role play the patients in each scenario, based on a script written by the medical faculty. Medical photography agreed to produce the recordings. Short video clips will be produced of simulated patients, with clinical signs and symptoms. In future sessions, these will be incorporated into the scenario.

Results
The effectiveness of these videos will be evaluated to ensure they add educational value. This will be achieved by assessing the doctors’ perception of the realism of the scenarios, and by measurement of the doctors’ interaction with the simulated patient.

Conclusion
Collaboration with the college should lead to a low-cost means of improving the fidelity of simulation training. Providing visual stimulus through these videos should give doctors a more immersive experience and help with the learning in both clinical skills and human factors. At the time of presentation, results will be available from this project.

References:
1. Barry Issenberg, S., et al. "Features and uses of high-fidelity medical simulations that lead to effective learning: a BEME systematic review."
How do place of qualification and ethnicity affect outcome in a paediatric postgraduate multiple choice examination?

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Postgraduate membership examinations represent a high-stakes hurdle for doctors in training. Our aim was to assess how place of qualification and ethnicity affect outcome in a multiple-choice, electronically-marked paediatric postgraduate examination, MRCPCH Part 1B. We conducted a retrospective analysis of pass rates of UK trainees sitting this examination from 2007 to 2011 using data collected from candidates by the RCPCH. The overall pass rate at first attempt of MRCPCH Part 1B was 843/2056 (41.0%). A univariate analysis demonstrated that passing the examination was significantly related to being a UK graduate, 649/1376 (47.2%), compared to an international medical graduate, 130/520 (25.0%); OR 2.68 (95% CI 2.14 to 3.36), P<0.001. Furthermore the likelihood of candidates passing the examination differed significantly for graduates of the 19 different UK medical schools, Fisher's exact test P<0.001. Logistic regression analysis adjusting for age, whether the part 1A examination was taken concurrently and sex, showed that being a UK graduate was still strongly associated with passing the examination, OR 3.17 (95% CI 2.41 to 4.17), P<0.001. Less than one-third of candidates chose to disclose their ethnicity (610/2056, 29.7%), and white candidates were significantly more likely to pass the examination, 198/386 (51.3%), than those candidates who reported themselves to be of Black and Minority Ethnicity (BME), 64/224 (28.6%); OR 2.63 (95% CI 1.86 to 3.74), P<0.001.

In summary, place of primary medical qualification was strongly associated with outcome at MRCPCH Part 1B, with a significantly lower pass rate for international medical graduates compared with UK graduates, and significant variation in examination outcome between graduates from different UK medical schools. Only a minority of candidates chose to disclose ethnicity, however for those that did so, white candidates were significantly more likely to pass the examination. These data could guide new initiatives to improve support and education for trainees at increased risk of examination failure, and may be useful in the development of undergraduate curricula and in helping trainees prepare more successfully for postgraduate examinations.

References:
Students’ Experiences of Masters Dissertation Supervision

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Background and Relevance
Previous research on postgraduate students’ experiences of research supervision during dissertations has highlighted the common occurrence of complaints and lack of satisfaction with the supervision they have received (Wisker 2004). However, most studies, even those in the health professions, have focussed on non-medical students (e.g. Bruce et al 2008). Although there has been general guidance published in this area in the medical education literature (see Kilminster 2007), there is a gap in the research literature regarding students, especially part-time clinicians, engaged in taught postgraduate Masters level courses in medical schools. This study aims to address this deficit.

The aim is to identify and report on students’ experiences of dissertation supervision in taught Masters courses in postgraduate medicine. The end goal is to identify factors which contribute to the success – or otherwise – of the experience of supervision. This will include the following steps:
1. A review of the literature.
2. In-depth interviews with students who have completed their dissertations in postgraduate clinically-related subjects within the Division of Medical Education, Brighton & Sussex Medical School (BSMS).
3. In-depth interviews with supervisors of students who have completed their dissertations.
4. A survey of students and supervisors to establish how the themes and issues identified in the interviews are experienced more widely.

In this paper, we present the findings from interview with past students.

Methodology
In-depth interviews, using an interpretive phenomenological approach, with a random sample of 12 students who have completed their dissertations within DME (formerly IPGM), BSMS. (These will also be utilised to inform the development of a standard evaluation questionnaire for students’ dissertations.)
The interviews were analysed using a ‘Framework Approach’ by the researchers. Each blindly coded the transcripts and verified each other’s coding. Agreement was be reached by an iterative process.

Results
This paper presents the emerging themes that were identified within the interviews.

Discussion and Conclusions
We highlight those issues which are similar to previous research. In particular, we attempt to relate our findings to Person-Centred and Transactional Analysis theories. Then we invite the audience to join in a general discussion of the main findings presented. Implications for supervision practice are highlighted.

References
Kilminster S (2007) AMEE Guide No. 27: Effective educational and clinical supervision Medical Teacher
A survey to assess the educational opportunities available to medical doctors during night shifts and a subsequent intervention addressing cultural attitudes to the post take ward round.

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Background and purpose:
During a meeting to discuss the “Shape of Training Report” [1] local trainees raised concerns regarding adequate opportunities to learn from patients they had admitted. The lack of trainee attendance on post take ward rounds (PTWR) was identified as one key issue contributing to this. We designed a survey to investigate trainees’ views, with the aim of using this to improve educational activities within the department.

Methodology:
Twenty trainees were surveyed following their last shift in a set of nights; surveys were completed on seven separate days (Mondays or Fridays), between 28/11/14 and 22/12/14.

Results:
25% (n=20) of the departments trainees were surveyed.
14 trainees found PTWRs useful with 5 unsure and 1 not finding it useful. 7 trainees reported attending PTWRs during their set of nights. Comments revealed that trainees appreciated the value of PTWRs as a way to present their patients and gain feedback (n=9). However, 1 trainee reported the environment as intimidating and 5 trainees thought that attending PTWRs would risk them staying late following their shift. Additionally, as an objective measure of feedback, 4 trainees reported completing workplace based assessments (WPBAs) during their set of nights. Most (n=17) trainees reported feeling comfortable asking for WPBAs to be completed, although comments suggested that shifts were ‘often too busy to complete WPBAs’ (n=6).

Discussion and conclusions:
These results suggest that although trainees recognise that PTWRs and WPBAs are useful educational tools, there is a culture of not attending PTWRs or of completing WPBAs. We have therefore designed an intervention aimed at changing this culture. PTWRs will be structured to allow night team members to see 1-2 patients before they finish shifts, ensuring European working time directives are not breached. Posters in the doctor's office and departmental e-mails will also make trainees aware of this new training opportunity and will encourage doctors to seek feedback after their night shift. Trainees will be re-surveyed once this intervention has been fully implemented and these additional results will be shared with the conference.

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TACTICS (Tailored Activities for Core Trainees in Clinical Simulation) - A Work in Progress

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Background
In 2014, a survey of Core Medical Trainees (CMTs) by the Royal College of Physicians (RCP) highlighted issues with current core medical training: “There has been a lack of continuity in supervision and training, overwhelming service provision at the expense of training and lack of preparation for the role of medical registrar” (p.153 (1)). The survey report suggested simulation training may form part of the solution to these problems.
In response to this survey we designed and ran a simulation course for CMTs based on their curriculum, addressing some of the issues raised. This study aims to see if reported confidence in managing the 4 emergency presentations from the CMT curriculum has improved with this course.

Methodology
A questionnaire was handed out pre- and post-course to ascertain confidence in managing the 4 emergency presentations of the CMT curriculum and confidence in managing a patient who requires external pacing (an issue reported in the RCP survey)(1).
We sent out the same, anonymised questionnaire to all West of Scotland trainees and are currently awaiting responses. This will allow us to assess if there is any difference in the confidence between those who have attended TACTICS and those who have not.

Results- A work in progress
To date we have run 9 courses with 74 trainees attending. The number of pre-course questionnaires completed was 74 (100%) the number of post course questionnaires completed was 66 (89%). Those who attended the course expressed an increase in confidence in managing each of the 4 emergency scenarios and in managing a patient who required external pacing.

Conclusions
As highlighted in the RCP survey there is a critical lack of training for CMTs in preparing them for the role of medical registrar(1). By using immersive simulation this course allows CMTs the chance to perform technical skills which they may not see during training and practice non-technical skills. This allows them to gain confidence and experience to carry out their next role as medical registrar.

Reference
Simulation in Acute Medicine: A Novel Multi-Disciplinary Team Training Programme Mapped to the UK Core Medical Training Curriculum

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Background and Aim
Simulation-based medical education (SBME) is increasingly used in healthcare to improve training, quality of care and patient safety. It facilitates learning in a supportive environment and encourages evaluation of practice within a multidisciplinary team (MDT). Although integration of SBME into the postgraduate educational curriculum is thought to be a key feature for its effective use, there is a relative dearth of SBME in Acute Medicine. We have designed and implemented a novel multidisciplinary high-fidelity simulation programme in Acute Medicine at the Royal Infirmary of Edinburgh (RIE), mapped to the core medical training (CMT) curriculum. Our aim is to improve management of acute medical emergencies and patient safety by providing a departmental MDT based SBME programme mapped to the CMT curriculum.

Methods
MDT based simulation sessions (comprising of three clinical scenarios) are delivered on a monthly basis. Sessions are delivered by trained faculty members in the clinical skills simulation suite at RIE. Twelve scenarios encompass all four “Emergency” and the “Top 20 Presentations” in the CMT Curriculum, with learning outcomes mapped to specified competencies. Post session feedback questionnaires were developed to assess immediate benefit and long-term application of learning.

Preliminary Results
Feedback was gathered from the first simulation session, attended by an Advanced Nurse Practitioner, five foundation doctors and two CMT doctors. All reported:
1. Increased confidence (measured on a 10-point Lickert scale) in managing major haemorrhage (mean increase of 2.8), sepsis (mean increase of 1.8), and hypoglycaemia (mean increase of 2.0)
2. Improved awareness of MDT roles, engendering better team working, leadership and communication
3. Positive feedback on the session, with enthusiasm to attend further sessions and to recommend the course to others.

Further results from future sessions, including evaluation of long-term application of learning into clinical practice, will be presented.

Conclusion
Provisional analysis shows that this programme has improved confidence in managing acute emergencies and teamwork. Future work will be focused on more detailed evaluation of the programme and refinement of scenarios to include other patient safety initiatives such as the sepsis change package.

References:
Do core medical trainees get to clinic? A questionnaire survey study of trainees in Severn

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Background and Purpose
Core medical training (CMT) forms the first stage of training for doctors wishing to pursue a career in medical specialties, and is usually undertaken after foundation training¹. It is designed to offer trainees experience of a wide range of specialties and the acute medical take. In 2011, the CMT curriculum was updated to include the need for trainees to provide evidence of satisfactory performance in 24 clinics by the end of the two-year training programme². A national survey in 2013 showed that 36% of trainees had attended ten or fewer clinics, and 71% wanted more clinic experience³. The purpose of this study was to assess performance in the Severn region, and to start exploring ways in which it may be improved.

Methodology
Advice was sought locally regarding ethical approval, which was not required for this study. All trainees undertaking CMT, or in a medically-themed year of the Acute Care Common Stem programme (ACCS), were invited to complete the questionnaire via an email which directed them to the SurveyMonkey® website. The survey included ten questions designed to obtain both quantitative and qualitative data about trainees’ experience of clinics. The qualitative data from free-text questions was analysed for recurring themes.

Results
Response rate for the survey was 27%, and at least one trainee from each acute Trust completed a questionnaire. Amongst trainees in their second or third of the training programme, 53% had attended eleven or more clinics by November of that year. Free-text responses revealed significant obstacles to attending clinic, with the most commonly-cited reasons being insufficient ward-staffing, no clinics set aside for junior staff, and lack of consultant support. Further results will be presented at the summer meeting.

Discussion and Conclusions
Many trainees are attending the required number of clinics, but this is often challenging to achieve for several reasons, often related to service provision. A large proportion of the work undertaken by medical consultants occurs in the outpatient setting, so it would seem prudent to ensure that those in the CMT programme get exposure to clinic work prior to embarking on higher training. This study will form the basis of quality improvement activities aimed at increasing trainees’ experience of outpatient work in the Severn region.

The Development of a Structured Syllabus-Weighted Revision Course to Augment Preparation and Improve Outcomes for the Gastroenterology Specialty Certificate Examination (SCE)

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Background

The Royal College of Physicians (RCP) introduced knowledge-based assessments as a mandatory requirement for obtaining the certificate of completion of training (CCT) for all UK medical trainees commencing after 2007. Many specialities introduced a speciality certificate examination (SCE), with the first gastroenterology SCE being held in 2008. Its current format consists of two 3-hour papers of 100 best-of-5 MCQs. Although a recommended reading list is provided, there are currently very few dedicated texts and only a single UK course in existence. The annual pass rate in 2014 was 76.2% for UK trainees and 53.5% for all candidates, worldwide.1

Methods

Self directed learning develops a deeper approach to learning and is considered the strategy most likely to prepare doctors for a lifelong learning knowledge base2, and so the aim of the course is to supplement rather than replace this. The course is to be held in February 2015 and is open to trainees nationally, ahead of the SCE in April. The gastroenterology curriculum3 was reviewed to identify key topics for speakers. The gastroenterology examination blueprint4 was used to provide statistical information about the composition of the SCE paper according to the curriculum topics. This has been reflected in the time allocated to each topic during the course. A pre-course real-time MCQ exam is included to stimulate prior knowledge. To encourage active learning, question and answer sessions have been dispersed between 20 minute didactic sessions. These are in a “best of 5” format using interactive wireless keypads so participants can compare their responses to their peers and the course examiners. Topics, which lend themselves to this, have been chosen including histopathology, radiology and endoscopy images. A further MCQ exam takes place at the end of the course to encourage recall and identify areas for ongoing self directed learning to the participants.

Results

Demographic data of course delegates (e.g. gender, age, training deanery) will be collected. Qualitative feedback to assess candidates’ overall satisfaction with the course will be collected using a survey. Quantitative data will be available by comparing pre and post course MCQ paper results and reviewing pass rates of those attending the course to the national average.

Conclusions

We have developed a concise course mapped to the gastroenterology curriculum and examination blueprint. We aim to provide a complete learning experience for gastroenterology SCE candidates by supplementing self directed learning in the lead up to the examination, and subsequently improving success rates.

References:

Training in Raising Concerns - a survey of a cohort of postgraduate medical trainees

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Aims
3. To establish the current understanding of postgraduate medical trainees about how to raise concerns
4. To explore reasons why postgraduate medical trainees do not raise concerns

Background
The Francis Report\(^1\) revealed damning evidence which demonstrated that failing to raise concerns can lead to devastating consequences. As a result of this, all NHS bodies now have a duty of candour, enforced by the Care Quality Commission\(^2\). NHS bodies have the responsibility to acknowledge and offer information regarding any safety incidents and offer apologies to the patients affected by these safety incidents, in a spirit of openness and transparency.

All frontline healthcare staff, including postgraduate medical trainees, thus have a responsibility to raise concerns. These include patient safety concerns, concerns about other healthcare professionals and training issues.

However, there often is a lack of clarity with regards to correct process of reporting concerns, which could lead to underreporting of these incidents. Moreover, fear of retribution and discouragement from seniors could further discourage trainees from reporting concerns.

The training in reporting concerns for postgraduate medical trainees is neither uniform nor standardized. The General Medical Council has set out guidance about raising and acting on concerns\(^3\) but these are not specific to regions or trusts.

In view of this, I carried out a survey to establish the understanding of a cohort of postgraduate medical trainees about how to raise concerns.

Methods
I designed an anonymous survey through the Surveymonkey.com website containing eight questions about raising concerns and training. This survey was sent via email to all Obstetrics & Gynaecology trainees in Health Education North West and I analysed the results of the responses that were collected.

Results
49 out of the 78 surveys that were sent out were completed and returned.
- 18% of trainees have wanted to raise concerns but did not know how
- 21% of trainees who raised concerns found that no action was taken as a result of the concern raised while 46% of trainees did not receive feedback
- 53% of trainees have been encouraged to raise concerns
- 12% of trainees have been actively discouraged to raise concerns

Discussion
Postgraduate medical trainees, like all frontline healthcare staff, are responsible for raising concerns and reporting incidents where patient safety has been compromised. However, significant numbers of trainees lack the knowledge of how to raise concerns and this could represent a training issue. Further research into this area is needed in order to address these problems.

References
Registrar-Led Coaching for Trainees

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The power of coaching and mentoring has been clearly demonstrated within industry and the NHS. As pressure increases on NHS personnel through organisational change, financial pressures and the power of the media, there is a growing need for support for the workforce, releasing the potential of the junior staff (tomorrow’s leaders), engendering leadership skills, and a renewed focus on work/life balance to enhance the careers of staff. We created the Imperial Lead Provider Coaching/Mentoring Scheme (Pilot). This confidential scheme is supported by the HEE Coaching/Mentoring Scheme both operationally and financially. This scheme is unique to other schemes nationally - the coaches are registrar level. The scheme aims to support junior trainees to make personal change whether it be professional or personal in nature. It aims to support trainees of all levels of achievement, and we anticipate/have experienced discussion points ranging from large career decisions (which speciality, out of training experience, leaving medicine), professional struggles for whatever reason, finding working within their team difficult, battling to maintain a work/life balance, the inability to say ‘no’ and many more.

We received funding to train 16 coaches. An application was sent to all SPRs in all specialities within North West Thames. We received an overwhelming response with 92 applications for 15 places (Dr S Pomfret, author, took the 16th place as organiser of the scheme). The applications were anonymised and blinded to speciality and assessed by two independent markers. The final 16 coaches are from a variety of specialities. The 16 Imperial Coaches all successfully completed their 3 day intensive training, and we have started coaching with a careful matching process in place. We have had a very experienced coach supervising us for our initial 6 month pilot period.

We only have few initial results. We hope to demonstrate the benefits of the scheme to both the ‘coachees’ and the coach. Many of the skills required by a good coach mirror the non-clinical generic skills on speciality curriculums, and also are those used by good supervisors – educational and clinical. There is also a growing emphasis on ‘Coaching for Health’ and it will be interesting to see if the training does impact the coach’s/coachee’s patient interactions. Quantitative and qualitative feedback will be collected at the end of the pilot to assess the success of the program with a hope for further funding going forward with possible expansion to include allied health professionals.

References
Bridging the Gap between Simulation and Clinical Practice Identifying Barriers in the Clinical Environment

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Background & Aims
Postgraduate medical curricula contain mandatory procedural skills including lumbar puncture, thoracocentesis and central venous cannulation. To address the challenges of appropriate training and quality assurance NHS Lothian has developed the ‘Clinical Skills Mastery Programme’. For each procedural skill, trainees receive knowledge packs (written and video resources) and a 2-phase supervised simulated training programme marked against standard set criteria.\(^1\) Although previous work has shown measurable improvements in technical ability through this mastery approach, can the standards taught be applied in the clinical environment? Anecdotally the greatest barriers to implementing the high quality approach advocated in the mastery programme are resource availability and timing.\(^2\) With a plan to mandate this programme across NHS Lothian we wanted to explore the practical barriers to implementing this in the clinical environment. A particular focus will be on accessibility of equipment in the ward.

Methodology
This study is currently being conducted in a district general hospital. Wards where lumbar puncture, thoracocentesis and central venous cannulation occurred were identified through face to face visits questionnaires with staff members. A total of 4 out of 27 wards were targeted for further review. Checklists for each procedure were sourced from the Clinical Skills Mastery Programme and used to set the standard for determining what equipment should be readily available and accessible in the clinical environment. Three doctors, a senior trainee resident to the ward, an external senior trainee and a foundation doctor were timed to ascertain time required to gather equipment and availability.

Results
A combination of quantitative data, looking at absolute time taken by the three separate doctors to identify any differences and qualitative data, exploring what barriers were present and why will be presented.

Discussion & Conclusions
This study will expand the literature on what barriers exist to the practical implementation of a gold standard of treatment in the clinical environment. We hope to show that by implementing an easy and effective system of ensuring equipment is available where it is needed and by employing a simple method of replenishing missing items, this will improve the opportunity for mastery skills trainees to develop their skills in real life practice.

References
Improving Junior Doctors Teaching Skills

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Introduction
The requirement for all doctors to contribute to the education and training of other healthcare professionals is clearly stated by the General Medical Council. In order to achieve this, doctors must attain the necessary skills to provide high quality education. Junior doctors are ideally placed to apply their recent experience of student education to high quality teaching that is greatly valued by students. This Trust place high emphasis on education as core business and hope to raise the profile of medical education to trainees at an early stage in their careers.

Aims
- To provide up to 20 individuals with an introduction to the principles of effective teaching
- To support these individuals to develop feedback and formative assessment skills
- To increase knowledge and skills in planning and delivering teaching, particularly in clinical settings
- To support these individuals to undertake a small scale training initiative within the Trust

Method
Three taught sessions introduced participants to the principles of educational theory, assessment and evaluation, lesson planning and writing educational objectives. This included a range of practical activities underpinned by formal teaching. Following this, trainees were required to apply their learning by undertaking a small educational initiative in their clinical area. Mentors were provided to support trainees during the project phase. Participants presented the results of their work to a panel of Trust senior executives.

Results
14/19 individuals completed projects and feedback was very positive. Trainees reported that the programme was invaluable in broadening their knowledge and skills in medical education and in facilitating the transition from undergraduate teaching experience to developing skills as a clinical teacher. Difficulties included time issues and underestimation of the amount of planning effort required.

Conclusion
This programme has successfully introduced a small number of junior doctors to the principles of formal educational practice and has succeeded in firing their enthusiasm for teaching. Several participants are planning to undertake Clinical Teaching Fellow posts and complete a formal qualification in clinical education.

References
Good Medical Practice 2013 General Medical Council http://www.gmc-uk.org/guidance/good_medical_practice.asp
Practice Based Teaching & Learning
Ebola – simulation is better than the cure

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Background
From early on in the crisis in West Africa, our hospital sought to prepare itself for seeing a patient with Ebola (EBOV or Zaire Ebolavirus). With a catchment area including a large African ex-patriot community and after many suspected cases, the possibility of seeing an infected patient and the risk to staff was very real. A door-to-door simulation was devised to test the whole multidisciplinary team in all aspects of patient handling, clinical management and laboratory testing to assess the robustness of the systems for handling these complex cases.

Method
A core faculty comprising the Emergency Medicine Clinical Lead, Microbiology/Infectious Disease Consultants, Infection Control Lead, Pathologist and Simulation Faculty were briefed before the exercise. The scenario began with a simulated patient1 (a simulation fellow, unknown to staff) booking into an unbriefed and unprepared A+E department. The encounter was allowed to proceed without intervention, with the faculty at a distance, until such time as the patient was correctly identified as an Ebola risk and isolated. Whilst in isolation the process was watched by the faculty to gain further insight into the difficulties involved around PPE (Personal Protective Equipment)2, barrier nursing and clinical assessment.

Mock blood samples were taken and then transferred to the laboratory for testing and the samples were followed by the faculty to the laboratory. All aspects of handling of the patient, potentially contaminated materials and samples were monitored closely. Contamination was assessed by the use of UV visible gel, which showed up deficiencies in the PPE and handling procedures.

The simulation was then debriefed by all the staff partaking and the core faculty.

Results
The simulation identified many of the expected at-risk areas - such as deficiencies in PPE, which led to several protocol changes. It also provided a chance to see the care provided from a patient perspective especially with regards to privacy and dignity – which had not been fully considered during planning. More importantly it demonstrated procedural deficiencies – such as a failure to ensure all staff had been educated on screening procedures and the Ebola plan and the handling of high risk materials in the lab. A follow up simulation, after education, demonstrated improvement in these key areas. This has allowed the hospital to optimise its protocols before an incident has occurred and in this way has been invaluable.

Key Messages
➢ A joined-up, multidisciplinary approach to in-situ simulation can provide a realistic test bed for complex medical and logistical problems and helps with the dissemination of knowledge throughout the hospital
➢ Cooperation between allied departments helps to make emergency planning and protocols more applicable and actionable through different departments

References:
1. Hardee, J - From Standardized Patient to Care Actor: Evolution of a Teaching Methodology Perm Jv.9(3); Summer 2005; PMC3396073
Cancer patients receiving radiotherapy and their attitudes towards medical students and work experience students.

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Background and Purpose
Work place based learning is important for gaining realistic medical experience and to enhance learning. Previous work investigated patient attitudes towards medical students in this setting 1-4. Limited information is available on the views of cancer patients receiving radiotherapy, which necessitates exposure of the part of the body being irradiated. For work experience students considering a career in medicine, obtaining experience in an active medical setting can also provide valuable learning opportunities. There is a paucity of information on patient’s views regarding the presence of work experience students during their care. The purpose of this study was to investigate cancer patient’s views in these areas.

Methodology
A self-report anonymised questionnaire was given by a review radiographer to 50 consecutive patients being treated with radiotherapy for a malignant diagnosis at the Royal Cornwall Hospital from June to September 2014. Information gathered included demographics such as gender and age. A 5 point Likert scale was used to assess patient’s views on the presence of work experience or medical students during their treatment, overall satisfaction and their willingness to disclose personal information.

Results
23 men and 27 women responded. 25% of patients declined to permit work experience students being present during radiotherapy compared with 2% for medical students. Overall satisfaction of patients was similar regardless of whether the student present was a medical or work experience student. More patients were willing to disclose personal information to medical students (90%) compared with work experience students (38%).

Discussion and Conclusions
Despite similar satisfaction ratings, more patients are willing to allow medical students to access the learning area of radiotherapy compared with work experience students. The patient is of course at liberty to decline involvement of students during consultations and treatment. However, a more thorough explanation of the involvement and importance of the opportunity for work experience students and confidentiality agreements in place may encourage more patients to accept their presence and enhance their learning opportunity.

References
Bridging the transition from student to doctor through practice based small group teaching

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Background and purpose
Medical students beginning their clinical placements receive inadequate preparation for the psychological adjustment required to engage challenging patients and illness; often, students are expected to manage with emotionally demanding working situations alongside a rigorous curriculum. Practice-based small group (PBSG) learning, also known as a Balint group, is a promising adage in continuing professional development to bridge this transition. Good medical practice requires doctors to reflect their experiences regularly, and it has become an acknowledged way of integrating clinical reasoning with personal beliefs. Nevertheless, there is a lack of evidence on the optimum method of achieving this. This research aimed to identify whether students with experience in a PBSG program valued the self-reflective approach, and if the program can be a potential tool in a less traditional setting.

Methodology
Qualitative research in the form of a designed questionnaire has been put to students who have participated in a Balint-style program. The aims were to assess students' prior perceptions, knowledge gained, value for the program and whether these participants' would recommend the scheme as a useful teaching method.

Results
The results of our student survey and of the process and delivery of a Balint-style program will be presented.

Discussions
To our knowledge, in the UK, only two institutions offer a form of psychotherapeutic teaching. The model is a highly adaptable method of education that uses real patient cases. Sessions can be delivered through two formats: firstly, identification of learning needs by discussing themes and topics relevant to the daily practice of a doctor. This may be one way of teaching final years students the nine domains of professional practice set out by the GMC. The second format focuses around a specific clinical problem encountered by the participants, providing a platform for insightful consideration of the doctor-patient dynamic. This may foster students’ confidence in discussing and reflecting upon ethical, professional and personal issues. Research shows that students value active over more didactic approaches in developing their communication skills. During the sessions, the emotional dimension of illness can be explored, adding emphasis upon whole patient care. Further, participants can share experiences with their peers that may facilitate further knowledge acquisition. The benefits of PBSG learning is that a greater number of students can be included, whilst the program can also be incorporated into the university curricula as a Student Selected Component (SSC), which would create funding for increased facilitators.

References
2. Eman Zaher, MB BS. Practice-based small group learning programs. Systematic review. Canadian Family Physician June 2012 vol. 58 no. 6 637-642
The “Team Assessment of Behaviour” tool for Final Year medical students: A reflective nugget to nurture professional identity.

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Ethical approval was not required for this study.

Introduction and Purpose
The “Team Assessment of Behaviour” (TAB) assessment stems from World War II and US military academies use of a multi-source process known as ‘peer grease.’ Its intent was to evaluate leadership skills of students. [1] Within medical education, the TAB has been integrated into training and the revalidation process with the aim of providing a more extensive understanding of an individual’s behaviour and professional identity. The tool, which relies upon multi-professional feedback, has been shown to not only improve self-evaluation skills but also enrich inter-professional communication and trust. [2]
Rees and Shepherd [3] have explored the use of the TAB assessment with reference to professionalism in medical students but no study explores the experience of undergraduate medical students using this tool. The use and experience of the TAB assessment by Final Year medical students in Bristol as an aid for self and peer evaluation of professional performance, and in preparation for F1, is explored in this study.

Method
This was a multi-centre study. Study participants were Final Year medical students based in three clinical academies within Severn Deanery—- North Bristol, South Bristol and Gloucestershire. All medical students at the University of Bristol are enrolled on the Undergraduate Medical eportfolio (UMeP), mirroring the Foundation eportfolio. The TAB tool is available. Students were invited to complete the TAB during their “Preparing for Professional Practice” block, the last of the MB ChB curriculum at Bristol University. Students were briefed on how to use the TAB tool and invited to send tickets to members of the multi-professional team from week four of this block. Individual interviews were conducted in students who had used the TAB. Questions prompted discussion on ease of use, the TAB as a tool for feedback and self-evaluation and value to professional development. Interviews were transcribed and a thematic analysis was conducted.

Results
Thematic analysis and qualitative data will be presented and discussed.

Discussion and Conclusions
Educational research suggests that feedback is enhanced if it follows the needs of the learner, focuses on specific aspects of performance in the workplace as well as being timely and specific. [4] The TAB has the potential to act as a platform to allow medical students to improve confidence and recognise areas they can seek to remedy. Qualitative data surrounding the use of this powerful feedback tool in fifth year medical students will be presented.

References
Referral Skills Training for Overseas Doctors

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Background and Aims

The NHS is increasingly reliant on doctors who have trained outside the United Kingdom, with recent figures suggesting a third of doctors on the medical register trained abroad\textsuperscript{1}. These doctors provide a vital resource for the organisation in terms of a workforce and also bring a cultural breadth that enriches the service. We have previously conducted a survey which demonstrated communication between doctors is often rude, dismissive or aggressive. This behaviour can cause significant distress to doctors of all grades. Making a verbal referral to another doctor was highlighted by one in three doctors as the most common trigger for rude or dismissive communication\textsuperscript{2}.

Concerns have been raised in medical literature that there is a disparity in the quality of communication skills between native trained and overseas trained doctors\textsuperscript{3}. Deficient communication skills of a referring doctor may increase the risk of provoking rude and dismissive responses from colleagues.

Method

King’s College Hospital NHS Foundation Trust provides a voluntary attendance professional development programme for doctors trained outside of the UK, which is provided in addition to their departmental or regional training. Training days are provided quarterly and are open to all training grades.

An interactive group training session was run for those attending one of the overseas development programme teaching days – on the topic of giving and taking referrals. The aim was to improve referral skills, increase confidence, and thus reduce associated anxiety and communication difficulties. The session involved group discussion of perceptions and previous experiences, role play, demonstration of structure tools\textsuperscript{4} and simulated examples with demonstration videos.

Results

All trainees (100\%, 8/8) felt that the session had improved both their understanding of referral techniques and their ability. Before the session 63\% (5/8) rated their confidence at referral technique negatively. However after the session 94\% (7.5/8) rated their confidence positively.

All trainees involved (100\%, 8/8) reported they would recommend the session to colleagues.

Discussion and Conclusion

Training on referrals as an aspect of inter-professional communication is an unmet need. Doctors who trained overseas appear to find this training useful, and report that it improves their knowledge, ability and confidence. Follow up work will aim to establish if the training improved real-life working experience of overseas doctors.

1. http://m.bbc.co.uk/news/uk-20869560
2. Unpublished data from local staff survey at King’s College NHS Foundation Trust
A project to develop a multi-institutional resource to support medical undergraduate students’ learning about responsible research conduct

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Background
Although engagement in research and publication and presentation of findings are not usually required to graduate in medicine, the General Medical Council requires an understanding of ‘the ethical and governance issues involved in medical research’\(^1\)\(^\text{[p18]}\). Furthermore, students ‘should…be honest, genuine and original in their academic work, including when conducting research, and take effective action if they have concerns about the honesty of others’\(^2\)\(^\text{[p13]}\). Students who indulge in research misconduct risk creating adverse perceptions of their University and of themselves.

At the ASME conference in 2014, we convened a workshop to explore the problems which arise when medical students engage in research out with the formal curriculum, unprepared and unaware of what constitutes responsible research conduct. Representatives from 5 UK medical schools attended including undergraduate medical students and academics with teaching and research experience.

Methods
Cases of research misconduct were presented together with relevant national and local policies. Discussion and analysis followed and consensus sought about key information for medical undergraduates about responsible research conduct.

Results
We identified the following as important: an understanding of research ethics, including awareness of whether evaluations or audits need ethics approval; an appreciation of research etiquette, particularly the need for early dialogue to establish clarity about roles and contributions; responsibilities regarding supervision, namely to be sought by the student and provided by the supervisor; awareness of institutional policies about codes of good research practice.

We agreed that we would collaborate to develop a reusable teaching and learning resource to include case examples, frequently asked questions and signposting to local and national resources.

Conclusion
Presentation of this work will provide an opportunity to share details of the resources that have been developed and discuss the multi-institutional experiences of using them with undergraduate medical students.

References
Medical School Culture and Its Impact on the Reporting of Staffs’ Unprofessional Behaviour

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Background and Purpose
Professionalism is an expectation for doctors and medical students alike; acting in a professional manner and also by reporting unprofessional behaviour that may impact on patient safety (General Medical Council 2009, para.20–23; General Medical Council 2013, para.22–30). Yet the Raising Concerns procedure, by which a student may report such behaviour, is not widely accessed by students at Dundee Medical School (Napier 2014; University of Dundee Medical School 2014). This qualitative study hopes to achieve an insight from students as to why this may be, which may go on to influence future development of the procedure.

Methodology
This is an exploratory single-case case study. Focus groups will be utilised to ascertain student perceptions of staffs’ unprofessional behaviour, and their perceptions of the Raising Concerns procedure at the University of Dundee. A documentary analysis will also be completed.

Results
The results are pending. The data gathered from medical students in Year 1-5 will be presented for discussion.

Discussions and Conclusions
The study will identify the aspects of medical school culture that impact on if a student does or does not raise a concern about a member of staff. The results will create an opportunity for discussion regarding the current Raising Concerns procedure, the culture of the medical school as a whole, and will hopefully provide a basis for implementing change, should the results show it to be necessary.

References
Catching them early? Using a pre-arrival task to encourage first year students’ engagement with professionalism

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Background
Medical professionalism includes aspects of professional governance, professional patient care and personal and professional development (Owen, Hill & Stephens, 2009). There is growing interest in what medical professionalism is and how we teach it. In the UK, the GMC specifically emphasised the doctor as a professional in Tomorrow’s Doctors (2009). While there is agreement that it is important to include medical professionalism in the undergraduate curriculum, there is still no clear model for doing so (Passi, Doug, Peile, Thistlethwaite & Johnson, 2010). That said, there is a strong argument for teaching the cognitive basis of professionalism and then building upon this through experiential learning (Cruess & Cruess, 2006).

Following a curriculum re-design in 2013/14 Southampton medical school began to teach explicit professionalism in the early years through a combination of lectures, symposia, student presentations and tutorials. The introduction was accompanied by an evaluation (using quantitative and qualitative data), which indicated that the majority of students were struggling to see the relevance. In addition to reconsidering content, format and delivery, a pre-arrival task was introduced in 2014/15. Pre-arrival tasks are increasingly used within higher education more broadly. They are intended to build student engagement and seek to mobilise students’ prior learning and experiences in order to connect them with a new course and/or institution. This, to our knowledge is the first time that a pre-arrival task has been used in a UK medical school context.

The presentation will outline what we did, how students responded and will offer key learning points (for staff and students).

References
Owen, D., Hill, F. & Stephens, C. (2009). Medical professionalism: more than fitness to practise. The Academy Subject Centre for Medicine, Dentistry and Veterinary Medicine Newsletter, 01, (18), 16-19.
Can the understanding of students’ constructions of professionalism inform the teaching of professionalism in the medical curriculum

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Background and Purpose
Medical professionalism is multi-faceted, complex and subject to change. Despite this challenge, supporting students to understand the meaning of professionalism, and develop professional attitudes and behaviours, is essential in order for society to maintain trust in doctors.

A critical incident regarding attendance, highlighted an apparent loss of professional values amongst medical students and led to this study.

Aims
- To explore students' understanding of the constructions of medical professionalism at different years of training
- To see what influences that understanding
- To draw some tentative implications for the impact on teaching of professionalism.

Methodology
This was a qualitative research project and group interviews were conducted of medical students at each year of training at Barts and the London medical school, including those undertaking intercalated degrees and the Graduate Entry Programme (GEP). All students enrolled on the MBBS programme were invited to participate and were selected by purposive convenient sampling. Interviews used a narrative design and were audiorecorded and transcribed. Data was coded in order for major themes to emerge using standard qualitative data analysis software.

Results
21 students participated in the study and 8 interviews (7 group interviews and 1 individual interview) conducted. Results from the interviews will be presented. In analysing the data and reporting the results, discourse analysis as described by Monrouxe et al (2011:587) was used, that is, individual, collective, interpersonal and complexity discourses.

Discussion and conclusions
The students had detailed and nuanced understandings of the definitions of professionalism, drawing on collective and interpersonal discourses. The “fear” expressed by first year students regarding professionalism is cause for concern. Teaching on raising concerns about how to report unprofessional behaviour needs to be developed.

Role modelling is central to developing professionalism as is a supportive learning environment and organisational culture. However, role-modelling and the formal curriculum alone are not sufficient particularly in the clinical years. Students experience inconsistencies on clinical placements where there is the tension between service and the drive to performative; by contrast with situated learning and reflective practice in teaching and learning. Students need space for less “prescriptive,” sense-making activities, such as small group discussion and fora both on and off-line which are student led, but supported by faculty, to allow critical reflection on issues of professionalism within a responsive organisational culture.

References
‘Pathways into Medicine’: A structured hospital work experience placement in Bristol and its impact on school pupils medical career aspirations and widening participation to medical school.

C Green, E Morris, J Morgan
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Background and Purpose
A number of studies have looked at the influences and factors contributing to an individual's decision to apply to medical school including, age¹, social-economic factors²³ and widening participation activities⁴. For several years now North Bristol NHS Trust has offered 36 annual work experience placements in the early summer for school and college pupils. This ‘Pathways into Medicine’ programme involves four full days observing the clinical work of various departments within the hospital and community. These placements are designed to give an insight into a medical career for pupils who are just finishing year 12 and considering applying through UCAS.

To our knowledge, there are no studies to date looking at the influence of a regional hospital work experience placement over consecutive years on students' decision to apply to medical school, impact on socio-economic widening participation and success on undergraduate entry.

Methodology
All the students who attended the four-day work experience placement between 2011-2014 will be sent a questionnaire to complete. The questionnaire created by the authors will include questions relating to socio-economic background, their experiences of the ‘Pathways into Medicine’ programme at North Bristol Trust, how it influenced their decision to apply to medical school and the success of their application. These data will then be analysed using mixed methods.

Results
No results are yet available as the data is currently still being collated.

Conclusion and Discussion
We will present the results of our analysis and discuss how this programme influenced Bristol school pupils understanding and motivation for pursuing a medical career, and to what extent this enterprise has been successful in widening participation to medical school.

References
Predictive validity of the UK Clinical Aptitude Test: Preliminary findings from a national study

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Background
The UK Clinical Aptitude Test (UKCAT) is used as a component of candidate selection in most UK medical schools and includes four cognitive scales (abstract reasoning, quantitative reasoning, verbal reasoning, and decision analysis). Previous research has reported that the UKCAT has predictive validity for performance in the first year of medical school1, which may extend into later years2. Here we present some preliminary findings on the predictive validity of the cognitive subscales of the UKCAT for performance in the clinical years of medical school, based on a large-scale national study.

Method
A series of univariate regression analyses was conducted to investigate the predictive validity of the four UKCAT subscales on medical school performance (theory and skills scores) in years three (n=4449) and four (n=3452). Performance scores were standardised within year and medical school. These analyses were rerun, controlling for school educational performance (A level or Scottish or Irish equivalent) in order to estimate the incremental predictive validity of the UKCAT scores.

Results
Univariate regression analyses indicated that all four UKCAT cognitive subscales predicted both theory and skills performance during years three and four of medical school. Controlling for the effect of school educational performance, all four UKCAT cognitive subscales predicted both theory and skills performance during the third year of medical school. During the fourth year of medical school, theory performance was predicted by all four UKCAT cognitive subscales, but skills performance was only predicted by the abstract reasoning and verbal reasoning UKCAT scales. School educational performance predicted theory and skills performance during the third year of medical school, but only predicted theory performance during the fourth year of medical school.

Main conclusions
These preliminary findings indicated that the UKCAT can predict theory and skills performance in the later years of medical school, over and above school educational performance. Furthermore, whereas school educational performance did not predict fourth year skills performance, the abstract reasoning and verbal reasoning subscales of the UKCAT did offer predictive validity for fourth year skills performance. Further data are likely to become available as approximately 25% of the medical school entrants have yet to be linked to the UKCAT scores. Once more complete linkage is achieved these analyses will be repeated.

References
The predictive validity of a personality self-report measure for medical school performance: Preliminary findings from the piloting of the Personal Qualities Assessment within the UK Clinical Aptitude Test

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Background
Good medical practice requires a combination of intellectual abilities, technical aptitude and professionalism. There is increasing interest in the use of assessments to measure personal qualities, rather than solely intellectual ability, in medical school selection.

The UK Clinical Aptitude Test (UKCAT) contributes to the selection systems of the majority of UK medical schools. It includes four cognitive ability tests (abstract reasoning, quantitative reasoning, verbal reasoning, and decision analysis) as well as measures of personal attributes. The UKCAT Board has commissioned a programme of research to investigate the predictive validity of the UKCAT and to support further development of the test content and implementation.

This poster will present preliminary data on the predictive validity of subscale scores from the Personal Qualities Assessment (PQA) for medical school performance, based on a large-scale national pilot study of the questionnaire as a component of the UKCAT.

Methods
Standardised PQA scale scores will be entered into a series of univariate regression analyses. Outcome variables will include theory and skills examination performance at medical school, standardised by medical school and cohort. Progression and drop-out for non-academic reasons will also be treated as outcome variables in multi-level logistic regression analyses.

If PQA scores are significant predictors the analyses will be repeated, controlling for performance on the cognitive subscales of the UKCAT, in order to estimate their incremental predictive validity over and above the cognitive test scores.

Results and conclusions
Results will be presented on the predictive validity of the PQA scores, measured at application, for academic performance at medical school. Results may also indicate whether the PQA offers incremental predictive validity for medical school performance over and above measures of pure cognitive ability.

Findings will contribute to the debate on approaches to the assessment of personal attributes in medical selection, and in particular the role of self-report personality questionnaires.
Dare to... –access to healthcare professions summer schools

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Background and Purpose
Over recent years a number of reports have emphasised the need to recruit medical students from a broad range of backgrounds \(^1\). Recent reports are calling for more action in widening participation\(^3\). The Great Western Hospital has established a program to deliver this.

Dare to Doctor is an annual three-day non-residential access to medicine summer school that forms part of our commitment to widening participation in medical education. Students are recruited who are aged 17 or older, attend local schools/colleges, interested in applying to medicine and expected to achieve the academic requirements required for entry to medical school. Entry is based upon merit alone. Clinical Teaching Fellows visit local schools to give talks to interested pupils, as part of a proactive outreach programme to generate interest in medical careers\(^2\).

Methodology
The general structure of these courses involves clinical shadowing and hands on experience to learn basic practical skills. There are also workshops on what it is really like to do the job, what being a student entails and advice on applications. Feedback was obtained through a post-course evaluation paper questionnaire, with questions using a semantic differential scale of 1-10. Qualitative data was collected using free text boxes and thematic content analysis was performed. Demographic data was also collected from the students.

Results
17/23 [74%] students attended a comprehensive school or local academy, 6/23 [26%] would be the first in their family to attend university and 15/23 [65%] would be the first in the family to study medicine.

The responses [n=23] to the 2014 course was overwhelmingly positive with the mean overall rating 9.1 on a 10 point scale.

Shadowing opportunities (9.4/10) and practice interviews (9.1/10) were the most highly rated and confidence improved from 5.4 to 8.1/10 following these workshops. Key themes in suggestions for improvement included more shadowing time and longer duration of the course.

Discussion and Conclusions
Our courses demonstrate that District General hospitals can develop and provide successful local access to healthcare professions courses. The structure of our course is transferable to other hospitals and other healthcare professions who wish to participate in widening participation. It enables hospitals to engage with the local community providing recruitment opportunities.

References
2) Wilkins, D., et al. (2013) Dare to Doctor: Lessons Learnt from an access to medicine summer school. ASME Scientific Meeting 2013 Abstracts and conference papers.
10 year review of the Graduate entry course at the University of Southampton- the BM4 experience

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Background and Purpose
The graduate entry medicine (GEM) programme at Southampton (BM4) was developed to widen access to medical careers, and its first intake commenced in October 2004. The underpinning principles advocate the provision of a curriculum that enables students to relate their learning to future practice, with encouragement to understand concepts and principles rather than to reproduce factual knowledge, and to adopt independent thought and self-direction in learning. Around 400 students have been enrolled in the first 10 years. We have used this time point to study how the demographics of student intakes have changes over this period, particularly as selection methods have changed with increased reliance on the UKCAT to shortlist.

We wanted to understand whether age at entry has come down, and whether we are inadvertently selecting science, as opposed to non-science graduates, with changes in selection criteria. Previous research suggests that graduate-entry has succeeded in recruiting substantial additional numbers of older applicants to medicine, with better representation from white and black groups, as well as widening academic and socio-economic diversity.

Methodology
We used UCAS data from all entrants, to derive data on first undergraduate degree, age, sex and socio-economic background of successful applicants. This was cross-referenced against data held by the Faculty of Medicine office.

Results
Preliminary analysis of data indicates no obvious pattern of changes in the average age and proportions of students from different categories of undergraduate degree during the 10 years. There does however appear to have been a decline in the number students aged over 30 who have been recruited to the course. Full details will be presented.

Discussion and Conclusions
The future of graduate entry programmes in the UK is uncertain with the possible move for full GMC registration to take place at graduation. Given the original intention of GEM to widen access, it is important and timely to provide additional evidence on the demographics of students who take this route in the UK.

Although this is only one centre’s experience, and UK wide data has been collated in the past, we believe that this extends current understanding by presenting data over a 10 year period.

1. Garrud. P. Who applies and who gets admitted to UK graduate entry medicine?- an analysis of UK admission statistics. BMC Medical Education 2011: 11; 71
2. James, D, Ferguson, E, Powis, D, Symonds, I, and Yates, J. Graduate entry to medicine: widening academic and socio-economic access. Med Educ 2008: 42(3); 294-300.
Does the performance of candidates in Multiple Mini-Interview predict future performance during their medical school career?

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Background and Purpose
The 2009 GMC document “Tomorrow’s Doctors” ¹ states that selection criteria should take account of both personal and academic qualities. The Multiple Mini-Interview (MMI) has been developed to assess non-cognitive skills and is used as part of the medical school selection process at Queen’s University in Belfast. This study aims to examine the predictive validity of the MMI by correlating candidates’ performance in MMIs, with medical school examination results as well as their relative performance in other UK selection measures.

Methodology
Applicants were selected for MMI based on academic performance and the UK Clinical Aptitude Test (UKCAT) in 2012 and 2013. Candidates were then selected for medical school according to their MMI score. First and second year examination scores were matched for 199 and 236 first- and second year students respectively who undertook the 2012 MMIs, and 235 first-year students who undertook the 2013 MMIs. Pearson’s correlations were used to test the relationships between MMI scores, scores in written examinations, Multiple Choice Questions (MCQs) and Objective Structured Clinical Examinations (OSCEs) and UKCAT performance.

Results
Performance in MMIs was significantly correlated with performance in OSCEs (statistically significant correlation range from 0.13 to 0.23) but was not significantly correlated with performance in Multiple Choice Question (MCQ) written examinations. UKCAT correlated best with performance in MCQs, less so with written exams and there was no significant correlation with OSCEs. There was no correlation between MMI score and either UKCAT score or A level score.

Discussion and Conclusions
A candidate’s score in the MMI was shown to be predictive of performance in OCSE examinations, which can be postulated to be more representative of non-cognitive attributes whereas performance in the UKCAT was predictive of MCQ score, which could represent cognitive skills. The study thus provides evidence to support the predictive validity of MMIs particularly performance in examinations testing clinical skills but also provides new evidence that the UKCAT may play a complementary role. It would also suggest that further longitudinal research to examine the ongoing relationship between MMIs and performance in medical school examination will be worthwhile.

References
Teaching About Specific Subjects
The United Nations Rights of a Child; what is the adolescent perspective?


Aim
To explore the most reported relevant United Nations (UN) Rights of a Child by 100 adolescents in hospital.

Methods
Five post-GCSE work experience students planning to apply for medical training found 100 willing adolescents in hospital to complete a questionnaire. The adolescents were aged between 11-18 years and supervised by a responsible adult. The adolescents were presented with 40 UN Rights of a Child and asked to rank their five most important Rights. The work experience students spent an average of twenty minutes with each adolescent, supporting them in answering the questionnaire. Other questions included were designed to collect demographic data and whether they had been aware of the UN Rights of a Child previously. The results were transformed into a piece of artwork by a paediatric patient at the hospital where this study was carried out. The art is demonstrated below.

Results:

<table>
<thead>
<tr>
<th>Top Five UN Rights</th>
<th>% of adolescents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-discrimination</td>
<td>44</td>
</tr>
<tr>
<td>Survival and development</td>
<td>40</td>
</tr>
<tr>
<td>Right to education</td>
<td>35</td>
</tr>
<tr>
<td>Children with disabilities</td>
<td>30</td>
</tr>
<tr>
<td>Protection from all forms of violence</td>
<td>26</td>
</tr>
</tbody>
</table>

The most important UN Right was non-discrimination, ‘The Convention applies to all children, whatever their race, religion or abilities; whatever they think or say, whatever type of family they come from. It doesn’t matter what their culture is…. No child should be treated unfairly on any basis.’ Closely followed by survival and development, ‘Children have the right to live. Governments should ensure that children survive and develop healthily’. 69% of the adolescents had not heard of the UN Rights of a Child.

Conclusions
These results demonstrate that adolescents value ‘non-discrimination’ as the most important UN Right of a Child. The role of the healthcare system is to protect as well as care for adolescents. These results are paramount as they provide insight into the minds of adolescents in hospital. Knowing that ‘non-discrimination’ is vital enables us to focus on maintaining equality and creating safe environments. Further work is needed to educate adolescents about the UN Rights and address the extent to which they feel these Rights are being upheld. This study is the first step to initiating change.

Artwork created by Amy Howes
Enhancing Non-technical skills within medicines management through inter professional simulation based education – Results from the TINSELS project

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Background
‘Non-technical skills’ are social (communication and team work) and cognitive (analytical and personal behaviour) skills that support high quality, safe, inter-professional care. We undertook to develop and pilot a conceptually underpinned package that addresses non-technical skills in the context of medicines safety. An original and replicable simulation based inter professional intervention has been designed and piloted and its effectiveness assessed.

Methods
The three-session simulation based intervention was underpinned by the SECTORS model for non-technical skills learning, supported by online materials and developed in consultation with various stakeholder and experts in the field. This led to ten core non-technical skill learning outcomes and a course consisting of three 90 minute simulation sessions completed over 2 weeks. Publicity to attract participants took place within our UK district general hospital site. After informed consent was received, participants completed pre-course learning online. The team developed a series of assessment videos that displayed either positive or negative examples of non-technical skills in each of the ten learning outcomes. Participants viewed the videos online as part of a non-technical skills observation test (NOTSOT) and recorded their observations both pre and post the educational intervention. These were assessed by two researchers and statistical difference investigated using a student’s t-test

Results
18 participants were recruited from a range of inter-professional groups and were split into two cohorts. There was a statistically significant improvement (P=0.0314) between the Mean (SD) scores for the NOTSOT pre course 13.9 (2.32) and post course 16.42 (3.45).

Conclusions
An original, theoretically underpinned, multi-professional, simulation based training programme can enhance non-technical skills within the context of medicines safety. Further work is needed to trial this course in other contexts and identify long term impact on behaviour.
Why is Gender Medicine a Must in Medical Training?

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Aims
Gender Medicine needs to be incorporated in the curriculum of all medical degree programs. This as usual meets with strong resistance on the part of students to efforts to increase their course load and exam burden.

Methods
We decided to incorporate Gender Medicine in the compulsory curriculum to make it a "normal" course. These efforts were supported by various legal and ministerial "Gender subsidies and guidelines."

Results
At Innsbruck Medical University Gender Medicine was in 2008 incorporated in the compulsory curriculum of all medical degree programs, human medicine, dental medicine and molecular medicine, namely in Semesters 3 and 10. Moreover, Gender Medicine is compulsory in the Clinical-PhD-program. In 2013 Gender Medicine was introduced as a key word for registration of diploma and PhD-theses and without advertising this fact already identified 127 diploma and eight PhD-theses in the first year.

Conclusion
The model for implementation of Gender Medicine in compulsory medical education and as part of the examinations has over the years, as anticipated, caused it to be viewed as "normal" despite initial resistance and aggression. Meanwhile, even the benefits of Gender Medicine, namely various possibilities for subsidies, have been recognized and utilized. Gender Medicine can and should be incorporated in all compulsory medical curricula. For science it offers new research approaches and possibilities for subsidies as well as being the basis for tailored offerings in prevention, diagnosis, therapy and rehabilitation for our patients.
The Present and Future of the Undergraduate Ophthalmology Curriculum: A Survey of UK Medical Schools.

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Background and Purpose
During the last century ophthalmology’s place in the undergraduate medical curriculum has been controversial (1). The Royal College of Ophthalmologists (RCOphth) recommends medical students develop five ophthalmic diagnostic skills. In addition, it advises on the ophthalmology knowledge a student should gain during their medical degree. These recommendations are similar to undergraduate curriculum guidelines from the International Council of Ophthalmology (ICO) (2). However, the influence of the GMC’s “Tomorrows Doctors” (3) report has created pressure on both the duration and content of ophthalmology teaching. This guidance does not recommend ophthalmology as a required clinical attachment in the undergraduate medical curriculum. Despite this, performing a direct ophthalmoscope examination is an expected competency during Foundation Year One training. A wide variation in the ophthalmology teaching that medical students receive has been identified previously (4). In this study we aim to investigate the content and organisation of undergraduate ophthalmology teaching that is currently being provided by the UK medical schools.

Methods
This is a descriptive research project conducted for a Msc in Medical Education at the University of Nottingham; and is supported by the Royal College of Ophthalmologists. To identify the participants of the study each of the UK medical schools was contacted to find out who was the undergraduate lead responsible for ophthalmology teaching. An electronic questionnaire was then constructed using the Bristol Online Survey tool. The questionnaire was adapted from a survey performed by Baylis et al (4) after copyright permission had been granted. The questionnaire was validated by five undergraduate ophthalmology leads before its national distribution to each of leads throughout the UK, inviting them to take part in the study. Participants had two months to complete the questionnaire. Data was collated using the Bristol Online Survey tool and then analysed using SPSS. This study has been reviewed and approved by the University of Nottingham Medical School Ethics Committee.

Results
The results from the online questionnaire will be presented.

Discussion and Conclusions
The results of this survey will give an indication of the current provision of ophthalmology undergraduate teaching in the UK. Comparing the current results to those from the Baylis et al study (4) will enable trends over time to be identified. A review of how closely the content of ophthalmology teaching in the UK aligns to the Royal College of Ophthalmologists undergraduate curriculum will also be performed.

References
Teaching Tomorrows’ Doctors How to Teach

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Background and Purpose
The GMC state that ‘all Doctors have a professional obligation to contribute to... education and training.’ However, our previous research has shown that there is a gap between the expectation and the level of training and in fact only 82% of Medical Schools in England offer some form of teaching skills training. We offered a course of evening tutorials for third and fourth year medical students designed to equip tomorrow’s doctors with the skills and enthusiasm to teach.

Methodology
We designed a course of interactive sessions combining both theory and practical components to cover teaching theories and principles as well as the provision of pastoral care. The course of evening tutorials was offered to all third and fourth year medical students at the University of Bristol. Both quantitative feedback, using the Likert scale, and qualitative feedback, using free text boxes was collected using a simple paper questionnaire.

Results
Both quantitative and qualitative feedback reflected great enthusiasm and value from the students. The students’ (n=11) average confidence in teaching and delivering pastoral care improved by 3.68 points on the ten-point Likert scale. Qualitative feedback was enthusiastic and positive; ‘interesting material,’ ‘concepts clearly explained,’ ‘I found the interactive sessions really useful,’ ‘good real life scenarios’ and ‘really good sessions.’ 10 out of 11 students felt that the course was fully relevant to them and their future role as a doctor; ‘good to think about this and how to handle.’

Discussion
Not only did the students feedback that they had greatly enjoy the course but there was a marked improvement in their confidence in teaching and a strong appreciation for teaching being part of their future role as a Doctor. Based on the overwhelmingly positive feedback, we have incorporated the course into the Preparing for Professional Practice module for the final year students on placement in our Academy and we hope to further this by collaborating with all of the University of Bristol Academies.

1 The GMC (1999), The Doctor as Teacher – archived policy document
3 Shariq O (2013), Teaching Skills Training for Medical Students, The Clinical Teacher, John Wiley and Sons Ltd, volume 10, pages 146-150
Skilling up medical students to promote health behaviour change and deliver brief interventions

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Skilling up the workforce to help people to adopt healthier lifestyles has never been more important. The rise in preventable illness and the persistence of health inequalities are among the greatest challenges for patients and the NHS. NHS staff are expected to use every contact with people to help them lead healthier, longer lives (Department of Health, 2014). As part of the revised curriculum at Warwick Medical School, we are skilling up our medical students to do this. By the time students enter their first sustained period of clinical learning in Year 2 they are all trained to engage in health behaviour change conversations, carry out very brief interventions on smoking and alcohol and are ready to deliver these to patients, under supervision, in the clinical setting.

Our spiral health behaviour change curriculum begins very early in Year 1. Students are introduced to health behaviour change, health promotion and health inequalities theories. In clinical skills sessions each student has the opportunity to practice identifying readiness to change with peers and with a trained Stimulated Patient. They also learn and practice taking lifestyle histories. All students receive ‘Make Every Contact Count’ training to enable them to understand the importance of brief behaviour change interventions and initiate relevant health behaviour change conversations with patients.

In year 2, at the beginning of their first core clinical education block, they all complete two online training courses:

i) The Very Brief Advice on Smoking online training course (National Centre for Smoking Cessation and Training): this includes all of the core competencies needed by practitioners in England to help smokers to quit.

ii) The Alcohol Identification and Brief Advice online training course (Alcohol Learning Centre) uses the FRAMES approach to screening and brief advice as recommended by NICE guidance. Students learn how to use an audit tool to identify patients’ risk of developing alcohol-related problems and to deliver brief advice using a structured advice tool.

After completing the training and practicing the interventions students are encouraged to try them out, under supervision, in their GP practice placement that follows. Skills will be assessed summatively using OSCEs.

This programme was developed collaboratively by the public health, psychology, clinical skills, and GP teaching teams working in conjunction with a health promotion specialist in an NHS Trust. We are currently evaluating the programme and some evaluation data will be available by the conference.

References
National Centre for Smoking Cessation Training: Very Brief Advice on Smoking online training course available at http://elearning.ncsct.co.uk
Exploring the transferability of a Bristol patient safety teaching initiative: the Murder Mystery pilot in Royal Free Hospital.

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Background
"Murder Mystery" (MM) is an innovative teaching project, which was launched in 2013 by educational fellows M Vannahme et al. at Bristol University. It uses a fictional case of a serious incident to introduce concepts of patient safety, in the form of interactive group exercises with elements of role-play. With permission from the Bristol group, we launched a pilot of the MM sessions for 5th year students in Royal Free Hospital, aiming to explore transferability and scope for expansion of this teaching.

Methods
Each MM session accommodates up to 16 students and runs over 3 hours (including a break) in 3 parts: a brief introduction to patient safety; a small group exercise with the purpose of puzzling together events leading to a serious incident; and finally a joint discussion/debrief. There is minimal didactic teaching; in fact, the leader is quiet for most of the session and facilitating for the rest. Nevertheless, patient safety is central throughout and participants identify learning points themselves. Only limited teaching materials are required, e.g. fictional patient notes, cards with roles and statements and flip-charts. The material has been adapted from Bristol with only minor alterations to contents.

Results
Our pilot is currently underway (23/90 participants to date) and will be completed in June 2015. Feedback has thus far been excellent and students agree unanimously that the sessions increase their awareness of situations where mistakes occur. A vast majority appreciates the interactive format. 96% of students agree the sessions were perfectly targeted at their level of clinical experience, and at least 22% would like sessions repeated at later stages of training.

Discussion
While our pilot continues, we are convinced of the transferability and potential of this teaching. It provides an original platform for patient safety education, as well as incorporating group work exercises and facilitating skills from leaders. We aim to expand the MM concept to multidisciplinary groups (spring 2015) and would like to report outcomes from this at ASME. Further aims include using real-life examples of serious incidents to enhance sessions and to introduce the MM to doctors of various grades. As patient safety training is increasingly becoming mandatory, we suggest this may be a preferable format with added benefits of allowing multidisciplinary interaction and also opportunities to discuss relevant local guidelines.
Raising psychiatry’s profile at medical school: an introductory game.

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Background and Purpose
In recent years the number of doctors applying for Core Psychiatry Training posts in the UK has been consistently low\(^1\). Certainly psychiatric conditions form 15% of the UK’s disease burden\(^2\) and so the importance of encouraging those interested in the specialty at medical school is clear. As the medical undergraduate curriculum limits clinical exposure to a just a few weeks during time spent at medical school, this can be challenging. Thus, the aim of this project was to introduce a novel form of raising the interest in psychiatry at medical school prior to the allocated placement.

Methodology
The project had three distinct stages:
1. Three focus groups with medical students in their fourth year at Gloucestershire Academy were conducted. These students had already undertaken a psychiatry placement. They were asked questions relating to their impression of previous psychiatry teaching and their perceived interest or attitudes towards the subject. Thematic analysis of the focus groups informed stage two.
2. A competitive card game was developed which conveyed clinical detail relating to psychiatric conditions and included their medical associations e.g. delirium in the post op or septic patient. A ‘trivia’ card for each psychiatric condition was also included to provide some historical or cultural relevance.
3. Student feedback was collected using a five point Likert scale.

Results
Thematic analysis of the focus groups revealed the need for interactive methods of teaching key concepts in psychiatry. Students felt unsure as to how medical illness could impact on mental health and vice versa. Data gathered so far on the card game suggests students find it enjoyable to play and the majority feel their interest has increased such that they would consider undertaking an eSSC in the subject. Complete feedback on the card game will be presented.

Discussion and Conclusions
It is clear educational games provide a way to stimulate and motivate students, and in our experience using the game for teaching novel information seemed to create curiosity about the specialty. Given the current recruitment difficulties interacting well at medical student level provides a strong platform from which to make a difference, challenging the stigma that is sometimes associated with the subject\(^1\). This card game can be integrated at any stage of the medical course, and would make a good adjunct to other profile raising strategies, perhaps capturing an audience before negative attitudes develop.

References
\(^1\)RCPsych, 2011. Recruitment strategy 2011-2016
\(^2\)Mental health foundation UK. http://www.mentalhealth.org.uk/our-work/campaigns/research-mental-health/ (accessed 22\(^{nd}\) January 2015)
Training the multi-professional team: the role of simulation-based learning in Neurology

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Introduction
Simulation based learning has become one of the central pieces in medical education. It has dominated disciplines such as emergency medicine and is beginning to find a niche in Neurology. Current Neurology simulation programmes tend to usually focus on management of acute strokes. In Tomorrow's Doctors, it highlights the need for learning and working effectively in a multi-professional team. Simulation-based training, with a focus on human factors, can offer an important route to safer care for patients.

Objectives
To develop inter-professional, leadership and team-working skills and recognise the impact of human factors on clinical performance. To improve recognition and management of Neurological emergencies.

Methods
The pilot multi-professional Neurology simulation training was conducted as two half-day sessions in the simulation centre of a university teaching hospital. Intended learning outcomes for the simulation experience included communication skills, situational awareness and management of acute neurological conditions. Scripts for three emergent scenarios were developed for each session: acute meningo-encephalitis with rapid deterioration, myasthenic crisis and status epilepticus. Training was offered to healthcare professionals working on Neurology inpatient wards. A high-fidelity manikin was used and candidates included specialist nurses (NSN), core medical trainees (CMT) and specialist registrars (SpR) in Neurology. A trained ‘nurse plant’ within the scenario was utilised to aid with its development and only provided investigation results upon specific request. The remaining candidates observed the simulation in another area via live video streaming. The monitoring was remotely controlled and changed depending on interventions performed. Debriefing occurred following each scenario using the SaIIL Debrief Diamond model. Evaluations were completed before and after the sessions.

Results
A total of 13 candidates (5 SpRs, 3CMTs, 4 NSNs) participated. On the Likert scale (1 to 5), there was increased confidence in managing neurological emergencies (average 2.8 vs 4.2); teamwork (4.7); communication skills (4.7); valuable learning tool (4.8) and all provided positive feedback regarding the multi-professional approach to training and overall enjoyment (4.8).

Conclusions
Simulation based training can be a valuable tool in Neurology training and helps increase confidence of both nurses and trainees in dealing with emergencies. It can be an asset in fostering inter-professional relationships and enhance the quality of patient safety and care. Additional studies are required to assess long-term retention of newly acquired skills and its effect on clinical outcomes on the wards if carried out on a larger scale.

References
Simulation Educational Intervention Improves Confidence in Management of Massive Pulmonary Embolism

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Background and Purpose
Simulation teaching can help facilitate the benefits of experiential learning in situations that are infrequently encountered through clinical exposure. This can be particularly useful if that infrequently encountered situation necessitates decisive emergency management, for simulation allows learning through ‘trial and error’ without undermining patient safety. One example of an infrequent situation that requires emergency management is pulmonary embolism (PE) resulting in haemodynamic compromise and cardiac arrest. For North Tees and Hartlepool NHS Foundation Trust, the need to improve training on PE management was highlighted due to the incorrect dosing of thrombolytic therapy in a case reviewed at the Resuscitation Committee.

The aims of this project were to assess the confidence in managing massive PE before and after the simulation based intervention.

Methodology
A one hour simulation based educational intervention, addressing management of PE, was delivered to core medical trainees. The first scenario was of a patient with haemodynamic compromise, the second of a patient in cardiac arrest due to suspected massive PE. The scenarios required learners to manage a patient simulated using a Laedel 3G SimMan Mannequin. Participants engaged in a reflective debrief that emphasised Trust, British Thoracic Society and Advanced Life Support guidelines on the management of massive PE.

Attendees rated their confidence in managing massive PE before and after the session. Attendees were asked using a Likert scale to what evaluate statements about the session.

Results
Before the session, attendees rated their confidence in managing massive PE with a mean score of 3.7/10 (range:1-7). After the session, the attendees reported their confidence with a mean score of 8.2/10 (range: 7-10). Attendees agreed with the statement ‘using simulation to practice using PE guidelines was an effective approach’, with a mean score of 9.5/10. All attendees reported that the session had improved their understanding of local protocols and practicalities for thrombolysis in massive PE.

Discussion and Conclusion
The simulation-based teaching produced a very large improvement in self-reported confidence in management of PE. But the relationship between confidence and competence is complex and inconsistent(1). Real-life assessment on the effect of an educational intervention on the management of relatively infrequent clinical occurrences such as massive PE is difficult. This initial project has prompted a study proposal looking at assessing competency in managing a simulated case of massive PE before and several weeks after the simulation based educational intervention, to assess if this improved confidence translates into improved management.

What is the students’ perception of learning ENT skills during Primary Care Assistantship?

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Background and Purpose
The mean duration of ENT placements in the UK is currently 8.7 days, which is an increase compared to a study undertaken in 2004 showing an average of 7.4 days 1. Despite that, Khan et al 2 showed that more than 75% of ENT Consultants covering more than 96% of teaching hospitals in the UK believe that junior doctors are not ‘proficient in dealing with common ENT problems that don’t require referrals’. Moreover, Sharma et al 3 reported that 75% of junior doctors ‘working in A&E, felt they had not received enough undergraduate ENT teaching’.

Currently Keele University Medical School relies heavily on Primary Care Tutors to deliver ENT teaching, as there is no formal ENT placement. In this study, we are evaluating students’ perception of learning ENT skills in 15 weeks of Primary Care Assistantship.

Methodology
The project is a prospective qualitative study. The sample group consists of forty year 5 medical students from Keele University who are currently placed in the Primary Care.

For data collection, small focus groups and an anonymised test, using TurningPoint® software, describing the students’ perception of learning the ENT skills will be organised. Data will be transcribed and coded to allow for analysis, for which NVivo® software will be used.

Results
Results from the focus groups are pending and expected to reflect students’ perception of learning ENT skills during Primary Care placements.

Discussion and Conclusions
As ENT is considered to be mainly a postgraduate subject there are currently no Intended Learning Outcomes linked to ENT in the Keele Medical School and a very limited number of sessions related to this speciality. In the light of this, having alternative strategies to deliver ENT skills and updating the current Undergraduate Curriculum should be considered to best meet the requirements of future junior doctors.

References
Anaesthetic Trainee Inductions: Round robins and how to teaching Major Incident Triage to Novices in Eight Minutes

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Background
New junior doctors are given a ‘hospital’ corporate induction, but without a role specific induction. The changeover period is renowned in it’s difficulties for junior doctors to settle in to a new hospital, specialty or role, and a significant amount of new knowledge and local practice needs to be delivered within a short period of time, due to the demands of service provision.

Methods
The Anaesthesia and Critical Care department trialled a ‘round robin’ style induction, covering key topics and skills, based on anecdotal and departmental feedback. This allowed for experts in respective skills and fields to deliver specific training in a high teacher to student ratio in a short period of time.

One station detailed roles/responsibilities should the hospital be put on standby/a major incident declared. Civilian Adult Triage Sieve practice, through case practice (represented by jellybeans), by the Inductee was facilitated by a doctor with MIMMS/Military training (2). This was carried out through the 4 stage approach (1)

Results
Subjectively, the eighteen trainees all engaged with and enjoyed the content and interactive nature of the station. Sixteen were able to triage all twelve casualties within the allotted time, the other two managed nine and ten respectively. Feedback was positive, with an average 30% increase in confidence on the topics covered. An average global score of 7.6/10 was given to the stations, and ‘overall usefulness’ of the induction averaging 92%, with a number of ‘free text’ comments.

These included the need for more time between stations and handouts to assist consolidation of knowledge and facilitating later revision. Other comments included: ‘its a fantastic way of getting across a large amount of information’, ‘novel way of keeping our attention’, ‘very innovative idea’ and ‘more time on major incidents – personal interest’.

Conclusion
Round robin style inductions with structured stations can impart knowledge and provide practical classroom experience in skills utilising a low student:teacher ratio.

References

Background and Purpose
Simulation training is recognised as an important tool in modern medical education. However, few studies have assessed its efficacy applied to teaching geriatric medicine\(^1\). Previously we designed and delivered a scenario around diagnosis and management of acute delirium for 4\(^{th}\) Year University of Bristol medical students during clinical geriatric medicine attachments at Swindon Academy, Great Western Hospital. This was shown to give students greater depth of learning and confidence in management of the condition. We have now gone on to develop a further scenario around assessment and management of falls.

Methodology
Clinical learning outcomes covered recognition, assessment and management of the acutely unwell inpatient with delirium, assessment and management of a patient following a fall and the need for referral and a collateral history. Our non-technical learning outcomes covered situational awareness, handover and effective communication within a team and with relatives. The students received two teaching sessions on diagnosis and management of acute delirium and falls. The first a traditional “2D” didactic lecture delivered to a small group. The second a “3D” simulation scenario delivered within our simulation suite, using a high-fidelity simulation mannequin with full clinical resources and doctors trained in simulation and debriefing. We compared depth of learning and confidence in management for both teaching modalities. Feedback from students was collated from questionnaires using semantic differential scales of 1-10 and analysed using descriptive statistics. Qualitative data was collected using free text boxes and thematic content analysis performed.

Results
We added data to our results on delirium and collected new data for falls. Our results to date find “3D” simulation training scores higher for both depth of learning and confidence in management of both delirium and falls than the “2D” tutorial. For delirium, the mean difference between scores is greatest for confidence in management (4.0 p=0.12) in contrast to depth of learning (2.75 p=0.12). Similar results have been found for mean difference between scores in confidence in management (3.5) and depth of learning (3.0) for falls. Strong themes in qualitative analysis were improved confidence due to the realism and practical experience.

Discussion and Conclusions
Our results demonstrate experiential “3D” geriatric medicine simulation to be a highly favoured and effective teaching modality compared to traditional tutorials, with improvements in both learning and confidence in management. On the basis of these results we intend to further expand our Geriatric Medicine simulation programme to encompass more scenarios.

References
Developing an Online Video Resource to Support Medical Student Learning in Haematology

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Background

Haematology is a conceptually difficult subject. Traditional approaches of didactic lectures do not allow students the space to learn in a constructivist fashion and therefore superficial learning techniques are employed. In the age of ‘digital native’ students, it is prudent to consider the resources with which they are most familiar. Many authors have found video to be a successful medium for teaching procedural skills\(^2,3,4\). There are several series of online medical educational videos which have achieved considerable commercial success\(^5,6\), however few studies have formally tested the efficacy of videos in teaching conceptual knowledge\(^7\).

We aimed to evaluate a novel video resource for its effect on student’s understanding of haematology. A secondary outcome was student satisfaction.

Methodology

Initial questionnaires and interviews were undertaken with medical students to determine preferences for format and style. Material for the videos was then trialled ‘live’ in small group teaching. Short videos, of 10 minutes per topic are being produced for third year medical students which blend animated sections with verbal explanations of key concepts. The resource is designed to be complementary to an existing medical school curriculum. Consultant haematologists will validate the content before it is published on the University of Bristol website and on Youtube. Students will complete brief pre-course and post-course testing for their haematology rotation. A control group will also be tested who completed their rotation before the video resource was created. Questionnaires addressing usability, content, presentation and learning value will be distributed. Satisfaction will also be indirectly evaluated by Youtube video analytics, which other authors have found to be useful\(^2\).

Results

Preliminary data suggested 70% of students found animated diagrams helpful for understanding difficult concepts. Audio or video narration was preferable to text alone. Feedback from the small group teaching was overwhelmingly positive. Pre and post course scores, questionnaire data, and video analytics will be studied.

Discussion

Initial feedback indicates that the video content is helpful in aiding understanding of conceptually difficult topics in haematology, however further evaluation is required. Online learning resources are taking a more prominent role in medical education, they can support traditional lectures but may in the future replace them entirely\(^8\). Student enthusiasm for creating electronic resources could also be useful as part of a peer assisted learning program.

Teaching, Learning & Assessment on Clinical Rotations
Understanding chairside teaching and learning

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Background and purpose
Dental chairside teaching and learning is challenging. Students implement their knowledge by rendering service to patients. Many of these procedures are invasive. Teachers serve both as clinical supervisors and teachers, simultaneously ensuring the safety of the patient and facilitating students’ learning through developmental feedback. Literature provides guidelines for quality clinical teaching and for appropriate staff development1,2,3. Few studies theorise how learning happens in the dental clinical context or explicate the relationship between teaching and learning. This poster presents a theoretical framework for interpreting chairside teaching and learning. Insights from the poster will facilitate identification of teaching practices that support learning.

Methodology
This poster synthesises the educational lenses of activity theory4 and cognitive apprenticeship5. It generates a theoretical framework to examine chairside teaching and learning.

Results and discussion
Activity theory draws on the theoretical assumptions of Vygotsky6 and positions learning as “a structured process whereby a culturally more experienced peer or teacher uses tools to mediate or guide a novice into established, relatively stable ways of knowing and being within a particular, institutional context, in such a way that knowledge and skills the novice acquires lead to relatively lasting changes in the novice’s behaviour”7. This definition echoes what happens in the clinical context where teachers use materials and strategies to assist students to develop cognitive and psycho-motor competencies. Activity theory plots the inter-relatedness of the component parts of teaching and learning (community, linguistic and non-linguistic tools, instructional and social rules, object, division of labour, outcomes) on a triangle. The poster uses an activity theory framework developed for mathematics pedagogy analysis4 to explicate the relationship between the component parts of dental clinical pedagogy.

Cognitive apprenticeship refers to the situated learning which takes place when novices learn alongside experts8,9. Cognitive apprenticeship is an appropriate lens for investigating clinical learning because students learn by performing tasks and solving problems in an environment which authentically reflects the ways in which that knowledge will be used in the future5. Modelling, coaching, scaffolding, articulating, reflecting, exploration, and creating a positive learning environment are identified as the key teaching strategies of cognitive apprenticeship5,8. The poster maps these strategies onto the activity theory triangle in order to identify exact characteristics of each aspect of teaching and learning in the dental clinical context.

Conclusion
This poster provides a theoretical framework for studying teaching and learning in the clinical context, and has, therefore, applicability beyond dental education.

References
Comparison of Online versus Paper-Based Forms for Course Evaluation

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Background and Purpose
There is increasing use of evaluation forms for quality assurance in medical education. Collating this data can be a time consuming process for medical educators when paper based forms are used, however concerns have been raised regarding the quality of feedback generated by web-based methods due to a lack of immediacy. We proposed that immediately collecting student feedback using a web based form at the end of the block would reduce collation time as compared to paper based forms without reducing the quality of feedback received.

Methodology
36 medical undergraduates completed a 6 week acute block and were asked to complete a web-based evaluation form. This contained 5 point Likert scales and allowed free text responses. Their responses were anonymised and sent to the block tutors in spreadsheet format. We compared this with the time taken to collate the feedback data for the previous cohort who completed a paper-based form containing the same questions. We compared the quantity and quality of comments in both cohorts. A comment was judged by group consensus to be constructive if it indicated potential changes to the curriculum. The number of constructive comments was used to determine the overall quality of the feedback.

Results
The time taken to collate the data from the paper-based form was 6 hours. For the web-based form collation was instant. Time taken for analysis was similar using both formats. The overall number of free text comments received was similar in both groups (259 web based vs 236 paper based), however the word count more than doubled in the web-based format (5058 vs 2301). The number of constructive comments received was slightly higher in the paper-based group (54 vs 40).

Discussion and Conclusion
Changing to a web-based form significantly reduced the time taken to collate the data without reducing the quantity of comments. Our data suggests that paper-based feedback generates more constructive comments; however this could be explained by variation between cohorts. We examined the data from the 5-point rating scales and found that the web-based cohort gave more positive ratings than the paper-based cohort. A further qualitative analysis of the comments received demonstrated more potential changes to the curriculum generated from the web-based cohort (11 vs 7). Our study suggested that web based evaluation saves time for tutors without reducing the quality.

References
Too scared to learn? Does the Emergency Department intimidate students?

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Background and Purpose
It is known that elevated stress levels can impair performance and academic achievement in medical students\(^1\,^2\). Addressing specific student concerns has been proposed as a method of improving performance\(^3\). We aimed to measure the degree of anxiety found in medical students prior to an ED attachment and aimed to identify specific factors that provoke most anxiety.

Methodology
A search did not identify a specific medical education anxiety tool therefore a decision was made to adapt the GAD-7 anxiety scale, which is usually used to diagnose generalised anxiety disorder\(^4\). We felt that the addition of two qualitative questions would provide a pragmatic compromise to collect relevant data in a short time period. The questionnaire was given to postgraduate medical students prior to attending shifts in the ED.

Results
28 questionnaires were received from students. The mean GAD-7 score was 2.96, with the lowest score being 0 and the highest score being 16. 53% of students felt “nervous, anxious or on edge” prior to attending the ED, however only 3 students were unable to stop worrying about their attendance.

The largest anxiety was caused by a perceived lack of knowledge or skills, however there were also a large number of concerns over the environment and staff that they would be working with. The most common suggestion for reducing anxiety was for staff to be more friendly.

Discussion and Conclusion
More than half of medical students studied felt nervous or anxious and in some students this was causing them to become irritable and to have trouble relaxing. Some students scored 0-1 on the GAD-7 (i.e. stated that they weren’t at all nervous or anxious) but then listed anxieties and ways of improving these in the qualitative section of the questionnaire. This may reflect that they feel less anxious than their colleagues but still wished to express particular anxieties about their ED placement.

It would be interesting to discover if students still felt that the department wasn’t friendly after attending shifts, as this was carried out prior to attending the department. The results of this study will allow staff to understand what makes students anxious about attending the ED and address these.

References
Medical student education, what is being taught?

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Introduction
Formal medical student teaching is largely designed to cover the core curriculum as guided by General Medical Council expected outcomes. This ensures universal knowledge skills and competencies for all graduates in the UK. However, with increasing emphasis on near-peer teaching and informal bedside sessions, students increasingly receive non-formal teaching sessions. These opportunities allow teachers to deliver unconstrained sessions and permit learners to explore a variety of specific educational themes and topics. Within a large tertiary referral hospital, the diversity of topics can be very broad and often extra curricular.

Aim
We propose a cross-sectional review of a large university teaching region to explore the common topics being taught. We will review the demographics of the sessions to investigate preferences between grade of teacher and topic taught. In addition we will review the format of session to review the variety of learning environments utilised and the common topics taught in different geographical areas.

Method
All data will be collected from the Teaching Log (TLog) online tool (accessed at www.TLog.org.uk) with the prior approval of the TLog data release committee. TLog was developed within the University Hospitals Bristol and is widely used by staff across as Bristol University academies to record teaching experience. Our study period will be one year, we will review the basic demographics of all teaching activity delivered to undergraduates as documented on the Tlog. Conclusions will identify topics commonly taught during informal sessions and will identify the diversity of teachers within a large teaching hospital.

Conclusions
The authors will use the results to establish if the teaching delivered across a variety of academies is bespoke and represents the specialties delivered within each academy. Data will also conclude if there are trends in the form of learning environment preferred by certain grades of teachers. This cross sectional review will provide a foundation of information about the diversity and trends in teaching in one large teaching region.
Factors Affecting Whether Work-Place Based Assessments Predict Doctors in Difficulty - A Qualitative Interview Based Study

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Background
Work-Place Based Assessments (WPBA) have become increasingly important as a method of assessing competence and performance. Many doctors in difficulty (DiD) however, have behavioural and professionalism issues which are difficult to assess. Therefore, the question arises whether WPBA are useful in predicting DiD?

Methods
A qualitative interview-based study was conducted involving senior members of the Health Education North-West (HENW) staff who were actively involved in postgraduate medical education (n=15). Semi-structured interviews were conducted until data saturation was achieved using Grounded Theory principles. A thematic analysis was then done using the Framework method to identify the major themes of interest.

Results
Four major themes were identified which affected whether WPBA predict DiD:

1) **Types of WPBA** – Team Assessment of Behaviour (TAB) main one useful though specific but not sensitive and rest of limited value.
2) **WPBA Content and Quality of WPBA** – remains poor lacking detail, often does not scrutinize and lacks discriminatory value.
3) **Assessor critique** – time constraints affecting trainer engagement, WPBA completion. Quality of feedback often poor especially lacking negative feedback or any constructive feedback.
4) **Trainee critique** – trainee bias with choice of assessors/cases; trainees lacking understanding and importance of WPBA and use them incorrectly.

Conclusions and Recommendations:
- Greater use of TAB with structured feedback.
- Improve quality of Educational Supervisor reports with better triangulation of information from WPBA.
- Improve training of trainers/trainees to enhance engagement and improve quality of WPBA completion and feedback.

References:
Foundation Doctors’ Preferences regarding Surgical Topics for Teaching and Methods of Teaching Delivery whilst on General Surgical Attachments

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Background
In the Standards for Curricula and Assessment Systems set by the General Medical Council (United Kingdom)\(^1\), it states all trainees should be provided with “learning in formal situations inside and outside the department”. It is therefore mandatory that formal teaching sessions be provided to Foundation Doctors by the General Surgery Department during their general surgical attachment. However, little is known regarding the foundation doctors’ opinions on the most useful teaching topics and best teaching delivery methods when providing teaching to foundation doctors in Surgery. This study aims to investigate the views of the foundation doctors on general surgical rotations at Gloucestershire Royal Hospital, to determine topics for teaching and teaching delivery methods that they feel would benefit them the most.

Methodology
All foundation doctors working on general surgical attachments between August 2014 and November 2014 at Gloucestershire Royal Hospital were asked to complete a questionnaire at 11 weeks of their attachment. They were asked what topics and modes of teaching they would have found most useful. For teaching topics, a blank answer box was provided. For teaching modes, they were asked to rank from a list of options that were deemed realistic by the department. The results were collated and statistically analyzed using Microsoft Excel software.

Results
Seven (100%) foundation doctors completed the questionnaire. Two (28.6%) doctors intend to pursue Surgery as a career. The most useful topic for teaching that was identified by five doctors (71.4%) was Peri-operative Care (e.g. fluid balance, pain management). Other useful topics that were identified include Anatomy, Details of Operations and Interpretation of Radiological Images. The most popular teaching delivery method was Case-Based Discussions, as all seven (100%) had ranked this within their top three. The second most popular was Bedside Teaching (57.2%).

Discussion and Conclusions
Foundation doctors on general surgical rotations at Gloucestershire Royal Hospital have a strong preference towards Case-Based Discussions and Bed-Side Teaching as the delivery method for their teaching. This suggests that they are most receptive towards teaching methods with strong applications to real-life scenarios. There was also a strong view that Peri-Operative Care should be a topic covered in this teaching. The results of this have since been used to implement a teaching program that focuses on case-based teaching incorporating those topics identified. We feel that these results can help focus education and improve foundation doctor satisfaction for teaching delivered within General Surgery Departments throughout the United Kingdom.

Mentoring for Foundation Year doctors in the Emergency Department – Results from a pilot study at a University Hospital

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Background
Emergency Department (ED) is an excellent learning environment with an unrivalled breadth of opportunity for clinical exposure, but it is a challenging environment due to unsociable hours, intense workload and frequent exposure to stressful situations. Foundation Year doctors are a vulnerable group of trainees who require guidance and support to maintain their personal wellbeing and to maximise their experience in ED. We have introduced a mentoring scheme for Foundation Year 2 (FY2) doctors rotating to ED. We present the results from the pilot phase of our study.

Aims
1) To identify the effects of mentoring on junior doctors’ professional and personal development in ED
2) To identify factors that lead to effective mentoring specific to ED
3) To address junior doctors’ perception of the specialty
4)

Methodology
The pilot took place over a four-month period (August-December 2014) in the ED at King’s College Hospital, London. Seven out of 16 FY2s volunteered as mentees and two ED SpRs acted as mentors. We organised regular individual meetings and set up group sessions to provide guidance and support. At the end of their placement, we collected mentees’ feedback in the form of a questionnaire.

Results
100% of the mentees perceived that a mentoring scheme is useful for personal and professional development; 5 out of 7 felt that they would benefit from more regular individual as well as group meetings during the 4-month period. One out of 7 has Emergency Medicine as career aspiration and has remained the same; the career aspiration for the other 6 was unchanged.

Discussion
The pilot scheme has produced encouraging results and all mentees felt that mentoring in ED had a positive impact on their personal and professional development. One major challenge was organising regular meetings (both individual and group) due to the constraints of the rota on mentors and mentees. Based on the results from our pilot scheme, a guidance for mentees and mentors has been produced suggesting regular, monthly meeting with signed record for each mentoring session, and a monthly group meeting. We have recruited 6 mentors (all ED SpRs).

We believe the mentoring scheme for FY2s in the ED has a potential to improve junior doctors’ perception of this specialty. Based on the result from our on-going study, we aim to implement a formal, structured and rolling mentoring scheme involving more mentees (FY2s, other junior trainees) in the ED.
Improving the confidence of future medical registrars through simulation

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The role of the medical registrar is both revered and feared by junior doctors. Part of this role is to provide care for the most complex or unwell patients\textsuperscript{1}, including leading the resuscitation team during arrest and peri-arrest calls.

Simulation has been used in a variety of medical environments from general practice to combat training, and with a range of goals including improving confidence, safety or interprofessional communication. In the case of junior trainees, simulation can allow them to gain experience in managing medical emergencies without putting patient safety at risk.

This study aims to outline the current level of experience and confidence of core medical and acute care common stem trainees, in managing the four emergency presentations in their curriculum, and leading a resuscitation team. In addition, we aim to evaluate the impact of ward-based simulation training on trainee confidence in leading arrest and peri-arrest events.

**Methods**
Core medical and acute care common stem trainees at Gloucestershire Hospitals NHS Foundation Trust were invited to participate in ward-based simulation training. Trainees completed a pre- and post-simulation questionnaire assessing their confidence and experience in managing emergency presentations, and leading a team.

Scenarios were conducted using an advanced patient simulator, which was placed in a ward bed, and resuscitation team members were recruited from ward based foundation trainees and nurses, with a varied experience level. The aim was to make the simulation as realistic as possible.

**Results**
Thus far, four trainees have had the opportunity to participate in ward-based simulation, only one of whom has previous experience at leading a resuscitation team. All trainees felt the simulation was realistic, and reported improved confidence in managing the presentation that was the focus of their encounter. In addition, three of the trainees also reported increased confidence in managing other emergency presentations.

**Discussion**
Ensuring junior doctors are confident to complete the role expected of them is imperative to medical training. Early results from this study indicate that ward-based simulation is both realistic and effective in improving confidence in managing emergency situations. Increasing the availability of such training methods can only be beneficial to our future medical registrars.

\textsuperscript{1} Royal College of Physicians. Acute care toolkit 8: The medical registrar on call: Maximising clinical experience, training and patient care. Oct 2013
Using peer mentoring to ease the transition into clinical medicine: A reflective analysis of a mentoring scheme between 3rd and 5th year medical students

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Background
The positive impact of mentoring on medical students has long existed with considerable support from the General Medical Council\(^1\) and the British Medical Association\(^2\) (2004). SCOPME report\(^3\) (1998) has identified the need to provide professional, personal and education support to doctors in training especially at a time of career transition. The need for such a pastoral role has become evident at Yeovil District Hospital (YDH) among 3rd year medical students whom are embarking on a transition from lecture taught medicine to clinical placement. This change encourages a new way of learning where students must find their own learning opportunities and develop a role in the clinical environment. This can often be quite a stressful time for students and feedback from current 3rd years placed at YDH has identified a need for more guidance and support. Although this is often effectively provided by academy staff we thought 3rd year students may benefit from some mentoring from 5th year medical students. Research has found that peer mentoring gives the mentee a sense of being connected to the work environment, improves self-confidence and helps the mentee to feel more comfortable to express their ideas and concerns\(^4,5\). We sought to establish whether students benefit from such a scheme or whether it was another point of contact they didn’t need.

Methodology
Six 3rd year medical students were each assigned a 5th year as a mentor whilst at placement at YDH. 5th years were given a tutorial on mentoring and what the process should involve along with some written guidance. The initial meeting between mentor and mentee was compulsory with a guideline structure as to what should be covered. Subsequent meetings were to be organised by the mentee when they felt it was needed. Feedback will be obtained from both mentors and mentee at the end of their placement.

Results
Results are pending and will be collected through questionnaire’s that will incorporate both quantitative and qualitative results. Numerical results will be statistically analysed whereas common themes will be gauged from qualitative data.

Discussion
The theoretical benefits of mentoring have been described but often these are not matched in practice. There is increasing support for mentoring, especially peer mentoring where students learn from others who have had similar experiences. Our study will shed light on how this relationship is beneficial and how it may be developed into a formal scheme at YDH.

3. Standing Committee on Postgraduate Medical and Dental Education (SCOPME) Supporting Doctors and Dentists at Work: an Enquiry into Mentoring. A SCOPME Report. The Standing Committee on Postgraduate Medical and Dental Education. 1998
Preparing medical and pharmacy students for managing complex polypharmacy in older people

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Background
Doctors and pharmacists now work together in hospital and community settings to manage polypharmacy for older people with complex co-morbidities.¹ There are concerns about medical management of complex high risk drug interactions for older people.²,³ Safe prescribing requires doctors to ask the right questions, focus on the unique person, use computer-technology on drug interactions and use patient-centred interprofessional decision making.⁶ We report on a short practice-based course where pairs of medical and pharmacy students were placed to work and learn alongside the acute clinical team to assess older in-patients with complex prescriptions. We will outline the course which takes place every eight weeks (taught preparation session adjacent to the clinical area, followed by ward work and feedback) and the evaluation outcomes (2011-2013).

Methodology
Using a mixed methods study, students completed a pre-post course questionnaire with scored (1-5 point Likert scale) and free text questions on the value of the learning, benefits and concerns. Student work was analysed including their case-study power-point presentation and their feedback form to the clinical team concerning polypharmacy and unsafe drug issues. Qualitative data were analysed using thematic analysis and scored questions using SPSS.

Results
525 (294 medical; 231 pharmacy) students participated in the course. 462 (88%) evaluation forms were collected. There were 101 in-patient prescriptions analysed and we obtained 86 students power point presentations (85%) and 67 (66%) ward feedback forms. The student's self-ratings revealed significant advances in their knowledge (P<0.01). The majority would recommend the course. The main themes were on, the value of the collaborative learning to understand polypharmacy, skills on analysing drug histories, engagement in drug-based professional communication and increased confidence to seek help and support for decision making within the clinical team. They felt more competent to manage polypharmacy in older people. There were reports from all students concerning pharmacy student’s unfamiliarity with wards systems. Patients were aged between 40-92 years and the number of medicines ranged between 5-36 drugs. The student case presentation and feedback form identified a range of safety issues fed back to the wards. These included STOPP/START, missed drug/drug interactions and errors when drug charts against the medicines code.

Discussion
As medical and pharmaceutical research advances, practising doctors require ever closer working relationships with pharmacists. To bring about this cultural shift both undergraduate students and those post-qualified need to continually reflect on how to offer optimal care through interprofessional exchange of knowledge and skills.

References
Facilitating ward-based learning for junior medical students through an apprenticeship.

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Background and Purpose
Hospital wards are busy and brimming with learning opportunities, whether it be shadowing a healthcare professional, talking to patients or practicing clinical skills. However the wards can be perceived as intimidating by students, which can have the effect of deterring them from effectively utilising these learning opportunities.

The current emphasis of the 3rd year medical students at Weston Academy is to clerk patients. This is driven by two assessments during their placement: the clerking portfolio and long case assessments. The intention of this apprenticeship is to give them impetus to explore other ward-based learning opportunities.

This study aims to facilitate integration of the students onto the wards. The experience, reflection, learning model1 suggests that learning can be enhanced through reflection on personal experience, and the students will be required to keep a reflective narrative2.

Methodology
With the help of two focus groups held with current 3rd year medical students we developed a structure for the apprenticeship. Each student will spend 1 week on a designated ward, followed by 1 session per week on the same ward for 4 months. The students will be provided with a checklist of suggested activities to complete during their time on the ward, for example shadowing a number of different healthcare professionals. The students will be asked to reflect on their experiences, and share these in group reflective sessions which will be facilitated by a Clinical Teaching Fellow.

Results
The material from the student reflections and group discussions will be analysed, and key themes will be identified. These themes and student feedback will be presented.

Discussion and Conclusion
The initial focus groups identified a lack of understanding of some basic ward-based activities, and highlighted barriers which prevented them from spending more time on the wards. The apprenticeship should encourage integration with other health professionals3, improve the students understanding of how a ward functions and this learning will be reinforced through a reflective narrative.

References
How do junior doctors learn in a busy clinical setting? Exploring trainees’ approaches and recommendations for learning in Acute Medicine

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Background and Purpose
Acute medicine is a rich learning environment with many learning opportunities arising from patient care. Junior doctors recognise that Acute Medicine is the foundation of medicine and shapes their training. However consultants have to manage two conflicting interests: keeping acutely ill patients' flowing through the system and facilitating learning. It is therefore important to guide trainees on how to promote their own learning and learn from clinical practice. The aim of this project was to explore junior doctors’ experiences of learning in the clinical setting, find out what helps them learn most effectively in a busy specialty like acute medicine, and outline recommendations so that their training opportunities can be maximised.

Method
This was a qualitative semi structured interview study involving trainees in Foundation Years and Core Medical Training in a district general hospital. Trainees were invited to participate in interviews to explore their learning experiences in acute medicine. The interviews were recorded, transcribed and a thematic analysis was performed.

Results
Trainees reported valuing independent practice, reviewing patients with consultants/registrars, being guided in their practice, working in a team environment and engaging with other professional with varying levels of experience. Feedback and reflection were seen as essential to the learning process. Workload, time pressure that is unremitting in acute medicine, lack of continuity of care, lack of involvement in aspects of patient care, lack of feedback or trust and reliability of the source of feedback associated with sociocultural factors had a negative impact on the learning experience.

Discussion and Conclusion
It is important that trainees take responsibility and challenge themselves in the learning experience. In order to maximise learning opportunities in acute medicine, there is a need to create a learning culture supported by consultants and managers to help them learn how to do this. Junior doctors need to be guided on how to drive their own learning, understand the strengths and weakness of the learning environment and be encouraged to challenge themselves to manage complex, acutely ill patients. This should be done with the confidence that they will have the support they need to learn, promoting high standards of patient care and ensuring patient safety. Steps that consultants and trainees can take to promote this will be discussed.

References
Who’s being trained to repair your hernia?

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Background:
Inguinal hernia surgery remains the cornerstone of general surgical practice with 70,000 repairs in England each year. Its role in surgical training has been underlined with its inclusion as one of the procedures with indicative numbers in the 2013 curriculum for general surgery. But are current general surgical trainees trained to perform this procedure, and will they be competent at CCT to provide this fundamental surgical procedure?

Methods:
A single 12 months “snap shot” of surgical training was taken from the evidence on the ISCP website of competency and training in a single region in England. End points assessed included total number of procedures performed per trainee, level of supervision, level of competence assessed by procedure based assessment (PBA) and progression of competence during the time period.

Results:
A total of 665 hernias were recorded by 40 trainees over the period of assessment, with a median of 13.5 per trainee. Of these, 252 (38%) were performed independently or whilst training more junior colleagues. Direct supervision occurred on 285(43%) occasions. The number of trainees demonstrating level 4 competency was 18 (45%). Evidence of competency progression was scant with only 12 (30%) of trainees showing increasing levels attainment during the period of assessment. Only 7 posts showed any evidence of training in hernia surgery.

Conclusions:
Despite the fundamental nature of hernia repair to surgical practice, its provision in surgical training is erratic and not universal. Hard evidence of true training and competency progression is equally scant. The need for focused training and modular training may be one solution to the essential requirements of general surgical training.
Pre-prescribing: What do the students think?

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Background and Purpose
GMC guidance advises that medical students must be able to prescribe drugs ‘safely, effectively and economically’(1). Despite this the EQUIP and PROTECT studies recorded prescription error rates of 8.4% and 7.5% in foundation year one doctors(2,3). In response the University of Edinburgh developed pre-prescribing, a controlled process for final year medical students to gain experience of real prescription writing. This study investigated the opinions of medical students about pre-prescribing, in particular, how they felt that pre-prescribing affected their preparedness for practice and how supportive clinical attachments were.

Methodology
All students who had been on wards that undertake pre-prescribing were invited to complete an anonymous on-line questionnaire. The questionnaires were designed using a focus group of students, with a mixture of Likert scale questions and free text responses.

Results
79/140 eligible students responded. A very positive attitude to pre-prescribing was noted, 95% of students found it useful. The major motivating factor for students (93%) to undertake pre-prescribing was preparation for practice. Students commented that pre-prescribing made them more confident choosing correct medications and doses. They also noted that they became more aware of potential errors and how to avoid them. Only 5% of students felt that pre-prescribing placed too much responsibility on them, in general they viewed responsibility as a positive aspect of the project. There was also encouraging evidence that time and opportunities are available for pre-prescribing during clinical attachments. Most students (72%) felt that there was enough awareness of pre-prescribing at junior doctor level, but 60% felt that this was not the case at Consultant level.

Conclusion
The initial response to pre-prescribing from medical students is encouraging, they feel it prepares them for practice and are happy to seek pre-prescribing opportunities (76%). However, the study has shown that the medical school needs to work to increase awareness of the project, especially at more senior levels.

General Medical Council. Tomorrow’s Doctor. London: General Medical Council; 2009
Technology Enhanced Learning
Are we returning to a two-tier system? Are financially challenged students being disadvantaged with the rise of paid online e-learning?

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Introduction
There are multiple eLearning websites and revision courses available for students to pay to access. They are targeted at final year students, a time when students are especially financially stretched. The BMA Finance Survey in 2011\(^1\) highlighted the worrying trend that students from low-income families are graduating with over £13000 more debt than their peers.

Method
A retrospective cohort study of current foundation year doctors from Bristol Royal Infirmary was the source of both quantitative and qualitative data. ‘Survey monkey’\(^2\) questionnaires were used to establish which paid eLearning and revision courses foundation doctors had used and why they had used them. Qualitative questions investigated the impact students felt paid eLearning and revision courses had on their exam results. Qualitative data was coded for key phases to look for emerging themes.

Results
46 foundation doctors responded to the survey. Over 86% used paid eLearning and 47.8% paid to attend a revision course. The cohort surveyed had a collective debt of over 1.3 Million Pounds, with the average foundation debt at graduation being £31386 (n=44) (range: £0 (n=3) to £62000 (n=1)). The key themes which emerged included: a lack of practice exam questions offered by their universities, peer pressure, and a fear of missing out on an opportunity all led to students paying for additional resources. 83% of respondents felt paid eLearning led to an increase in confidence with medical school exams, whereas only 62% felt revision courses increased confidence. 2/45 doctors could not afford to use paid eLearning and 8/45 did not attend a paid revision course due to financial constraints.

Discussion
This snap-shot survey highlighted the commonplace use of paid eLearning. Two students felt disadvantaged because they could not afford to pay for eLearning. The hallmark of inequality is that it disadvantages a minority and thus this is significant in itself. There was split opinion on universities offering means-tested grants for paid eLearning or revision courses, but those who disagreed were personally able to afford the additional resources. The overriding reason for paying for additional resources was due to a lack of provision of practice questions from the universities. With rising debt and increasing tuition fees it is important that universities address the inequalities amongst students. One way inequality secondary to financial hardship could be addressed, is to provide a greater number of sample questions to prepare students.

2. www.surveymonkey.com
The GMC Panel: High Fidelity Teaching on the Use of Social Media

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Background and Purpose
As of the third quarter of 2014, Facebook had 1.35 billion monthly active users. A cross sectional study in the Severn Deanery found that 100% of medical students used Facebook, 88% of which reported having viewed colleagues acting ‘unprofessionally’ on the site. 13% of such reports from US medical students were in fact breaches of patient confidentiality. There have been multiple medico-legal cases where unprofessional use of social media has compromised patient safety. BMJ careers reported 28 complaints to the GMC since 2009 regarding doctors’ inappropriate use of social media. I aimed to increase student awareness of safe, professional use of social media as a medical professional.

Methodology
Prior to the session we had designed fictional cases, based on high profile real-life cases, where a medic’s unprofessional use of social media compromised patient safety. Our teaching session started with a fantastic talk from a medico-legal advisor, covering professional use of social media and previous medico-legal cases. Final year medical students on placement at our Academy were then allocated one of the five cases. One student acted as the defence and one the opposition. The students had two weeks to prepare their cases. After the two weeks they came back to stand in front of a mock GMC panel in a mock courtroom where they argued out the case and were questioned by the panel.

Results
100% of attendees used Facebook and felt that the session was 9.44 (10point Likert) relevant to them. On a 10point Likert scale students noted a 2.11 (Pvalue0.0004) increased consciousness of their use of social media and a 1.66 (Pvalue0.0058) increased awareness of what is ‘unprofessional’ on Facebook. Students noted a 2.11 (Pvalue0.0007) increase in awareness of the implications of unprofessional use. Students felt 2.0 (Pvalue0.0017) more aware in available support and advice on the use of social media.

Discussion
Doctors and medical students are frequently using social media sites unprofessionally. We designed a high-fidelity teaching session to bring to life the medico-legal aspects associated with use of social media.

2 Rilee, Feb 2013, The Social Media Highway Code, Royal College of General Practitioners
4 S Boyles, Sept 2009, Med Students Put Unprofessional Info Online: Survey Shows Some Students Break Confidentiality of Patients on Facebook and YouTube, WebMD Health News
5 Rimmer A, Dec 2014, Doctors’ Concerns over Social Media Use Continue to Rise, BMJ Careers
Developing a student-led Medical School welfare website.

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Background and Purpose
Over the past year a welfare website has been developed at The University of Nottingham Medical School. While staff guidance has been available, development of the website - including research, liaison with key stakeholders and coding - has been entirely student-led. The result is an all-encompassing welfare website with information on various issues faced at university, signposting sources of support and links to other online resources. This website aims to improve the pastoral support in two ways: firstly, by challenging medical students’ attitudes regarding (non)disclosure of issues they have, particularly mental health problems, and removing barriers to help-seeking; and secondly by improving awareness of and access to the support that is available. The website contains short videos and over 40 anonymised personal stories from students to raise awareness of the issues faced, and to illustrate that it is perfectly OK to seek help. To improve access there is a page with profiles and contact details of all pastoral staff. Also incorporated into the site are links to university, local and national resources. The aim of this study is to evaluate the website in terms of usage and student feedback.

Methodology
Methods used to assess usage of the site will include questionnaires, analysis of website usage statistics, interviews and focus groups. Particular focus will be given to factors including accessibility, understandability and usefulness. The usage statistics will be monitored on a weekly basis from the launch to look at the initial uptake and ongoing usage.

Results
Usage ratings will be analysed to look at the use over a prolonged timescale. Results from questionnaires and interviews will be accumulated and assessed to identify any common themes and whether the overall response was negative or positive. As the website will be a dynamic, working resource, changes may be made along the way in response to these findings.

Discussion and Conclusions
The website is due to launch in February 2015 and will remain a work in progress. Therefore, the focus of the presentation will be the process that students have gone through to create the site, covering tips for developing such a resource and the challenges that have been faced, with the hope that this will help other students or staff members wishing to undertake a similar venture at their institution. The website and its workings will be demonstrated in real-time to provide illustration.

References
L-log: An undergraduate Learning logbook recording clinical activity.

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Background and rationale
The transition into the clinical phase of undergraduate education from a comparatively regimented pre-clinical timetable of lecture and tutorial-based learning can appear unstructured. As is appropriate for this stage in medical training, the responsibility for learning becomes more student led and self-directed.

It is important that students are encouraged to seek out the learning opportunities available in their locality and furthermore have a resource that provides evidence of their engagement in such learning activities.

The L-log concept
L-log (learning log) is an online logbook under development that is intended to provide a platform for undergraduate students to record their clinical activities. The tool is website-based and requires initial registration then simple student sign-in with each visit. Registered students are able to log their experiences including location, date, duration and clinical activity (for example ward round, shadowing, out-patients clinic) and specialty (for example neurology, respiratory, urology). Development options include documenting the session supervisor and the potential to integrate register and feedback functions.

No patient details are recorded. Drop-down menus will be used for the entry domains to make the logging process simple. The website stores this information on a secure server and is capable of generating a .pdf summary of the clinical activities logged at any time point according to a user request. There is also the opportunity to include a supervisor signature space to allow validation of the log. This log is intended to record only clinical activity and does not seek to list tutorials, lectures and other more formally delivered aspects of their clinical years.

The online infrastructure for this logbook system already exists within the highly successful T-log (teaching log) innovation previously developed within our centre at a regional University Teaching Hospital in collaboration with the University of Bristol. This secondary application should complement this existing service and will allow learners to become familiar with the shared online interface for later use of the T-log teaching logbook.

It is proposed that L-log will help students to reflect on their range of clinical exposure and assist them developing an appropriate breadth of experience during their clinical phase of undergraduate training. It will also provide a tool for clinical supervisors and mentors to quickly review a students’ activity history, and indeed identify particular strengths or omissions. It is intended this freely available tool will help students achieve recognition for their clinical experiences at an undergraduate level.
Moving with the times - medical education in the digital age

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Background and Purpose
Within the UK, the General Medical Council (GMC) now requires all medical students and postgraduate trainees to have named, accredited clinical supervisors in every hospital or community placement. A framework for the professional development of medical educators adopted by GMC is currently being operationalised by Health Education England. Given the time pressures of the busy doctor, difficulties of geographical access, the roll-out of the GMC guidance and the launch of the national revalidation programme for doctors, the time appears ripe to bring postgraduate medical training into the digital age.

Massive Open Online Courses (MOOCs) have made online learning on a plethora of topics accessible to thousands of learners worldwide who would otherwise be unable to access this learning. There are several MOOCs suitable for postgraduate medical training but these have largely been offered by platforms based in USA eg. Coursera and EdX. Faculty development/postgraduate medical training offered through MOOCs is limited in the UK.

There was a unique opportunity for UEA to launch a two week MOOC in March 2015 on the FutureLearn platform offering free, online clinical supervision training to medical educators, a community that has hitherto relied largely on face-to-face training. The aim of this project is to evaluate the first run of the MOOC using data collected during the course.

Methods
The MOOC focuses on two areas that can be challenging to new supervisors – giving feedback, and remediation for trainees needing extra support. Data will be obtained from FutureLearn course analytics, learner participation and feedback, and the course team. Effectiveness of the MOOC will be evaluated using a published framework for evaluation of e-learning in health.

Results
The course analytics will provide a rich source of quantitative and qualitative data including the geographic reach of the course, the medical education roles of the learners, as well as the motivation for undertaking it. Samples of discussion board content will be used to illustrate specific points made by learners.

Discussion and Conclusion
This work will enable us to evaluate the effectiveness of using MOOCs for faculty development and postgraduate medical education. Effective clinical supervisors need to continually develop, maintain and refresh their supervision skills, and keep in touch with medical education literature and policy developments to maximise patient safety. For the busy medical practitioner, MOOCs provide a potential mechanism to keep up-to-date with developments in clinical education.

References
4. Clinical Supervision with Confidence (Future Learn MOOC website: https://www.futurelearn.com/courses/clinical-supervision-with-confidence)
Are clinical teachers failing to fail?

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Background:
Duffy (2003) published a landmark study exploring nurses’ attitudes towards failing a nursing student. She discovered that nurses were ‘failing to fail’ students which ultimately leads to concerns around patient safety, and quality of care among other things.

Summary of work:
A small pilot survey was sent to 25 doctors asking them to complete an anonymous survey regarding their experience of failing medical students. Twelve responses were received from a range of specialties and grades.

Summary of results:
11:1 had teaching/assessing qualifications ranging from local study days to MMedEd.
55% had failed a student for OSCEs/ALS scenarios/clinical skills. 45% had not, although one responder commented: “but I should have”.
45% of responders said that they had passed a student when they were not 100% sure of their competence.
One responder stated that although they achieved the minimum ‘score’ for their OSCE, they didn’t give an overall impression of competence. Another claimed that ‘nerves’ were a factor during assessments.
Two responders out of nine said they had not failed a student when perhaps they should have done. One claimed that they “had seen it done repeatedly”
Of the two doctors who had ‘not failed’ a student when they should have; one reflected that as an F1/2/SHO the assessments were not seen as being that important, or token tick box exercises. Confidence in failing students has grown with seniority.

Discussion:
The results show that although this is a small scale pilot with limited responses, there is a clear identification that doctors might be ‘failing to fail’. The responses highlight that there are several differences in the way that medical students and nursing students are assessed, however, there are also similarities in the way that assessors feel about the process of failing a medical student.

Conclusion:
From the work done by Duffy in 2003 the Nursing and Midwifery Council (NMC) published the Standards to Support Learning and Assessment in Practice (SLAIP, NMC 2008) which is the framework for curriculum design for university mentoring modules. No such guidelines exist in medicine. Tomorrow’s Doctors and Good Medical Practice (General Medical Council 2009 & 2013) allude to doctors being trained in teaching and assessment techniques without the identification of relevant competences for the clinical teacher. PGCert/Dip/Masters programmes all cover this content, however, they are expensive and time consuming for all doctors to attend.

Take Home Message:
Is there a need to explore the concept of ‘failing to fail’ further in medicine? And could this lead to the development of standards to support learning and assessment of medical students in practice?

Duffy K. (2003) Failing students: a qualitative study of factors that influence the decisions regarding assessment of students’ competence in practice. Caledonian Nursing and Midwifery Research Centre School of Nursing, Midwifery and Community Health. Glasgow Caledonian University
General Medical Council (2013) Good Medical Practice. London
General Medical Council (2013) Tomorrows Doctors. London
Nursing and Midwifery Council (2008) Standards to Support Learning and Assessment in Practice, London
Assessing the validity of an online assessment for Cancer Care medical undergraduates

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Background and Purpose
Feedback from medical undergraduates rotating through the 7 week senior rotation ‘Cancer Care’ at the University of Leicester suggested that they felt the need for increased feedback, particularly with regards to application of knowledge and readiness for the upcoming Final Professional Examinations. An end of rotation formative grade is awarded, previously based on completion of a workbook and reflective essay, tutorial participation and a clinical grade based on a minimum of two workplace based assessments. We introduced a multiple choice assessment consisting of single best answer and extending matching questions, which we set up on Blackboard, an online learning resource. Students were expected to complete the assessment under exam conditions, and received a score and feedback electronically immediately after completion of the assessment. We set out to assess the predictive validity of this new end of rotation assessment.

Methodology
We compared results from the first year we ran the new assessment with the scores student achieved in the written component of the Final Professional Exam. Correlation was assessed using Pearson correlation coefficient.

Results
Two hundred and thirty students sat the end of rotation cancer care assessment between March 2013 and February 2014. Two hundred and nine of these students also sat the Final Professional Examination in March 2014. Comparing results from both assessments, Pearson correlation coefficient was 0.2 with a 2 tailed significance of 0.006.

Discussion and Conclusions
We have found very weak, but statistically significant correlation between the scores students have achieved in the new assessment and the scores they eventually go on to achieve in the Final Professional Examination. We have since gone on to double the number of questions in the new assessment from 30 to 60 to increase reliability, and plan to repeat the analysis with this year’s results once available. Practically, we have found the introduction of the online assessment to be simple, with little intervention needed once the questions have been set up on blackboard. Well written questions are vitally important, so application of knowledge can be tested. In combination with the other assessment methods currently in place we feel that all aspects of Miller’s ‘Pyramid of Competence’ 1, (knows, knows how, shows, does) are assessed allowing fair and constructive feedback without being overly time consuming or requiring significant resources.

References

Why do OSCE examiners vary?

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Background
Examiner variation can be as high as 17 % for any Objective Structured Clinical Examinations (OSCE). (1 -3 ) Accordingly some examiners are labelled as “hawks” because they mark more harshly than the majority of examiners while at the other extreme excessively generous examiners are known as “doves.” Students expect an even playing field, where the only difference between candidates is student ability and knowledge. Examiner variation has the potential to impact on students’ marks.

Aims
To identify who are the extreme examiners and to investigate possible factors for examiner variation.

Methods
A prospective questionnaire was administered to all Final MB OSCE examiners in February 2014. The questionnaire asked general demographic questions about the examiner that included details about their age, gender, grade and specialty. In addition they were asked about their teaching and examining experience at both an undergraduate and postgraduate level. Individual examiner Z-scores were calculated for each station that they examined. Z-scores are derived as a measure of how much the raw score deviates from the mean in standard deviation units. An extreme examiner was defined as any examiner whose Z-score was greater than +2 or less than -2 and corresponds to two standard deviations from the mean. Multivariate analysis was used to investigate the influence of any of the factors on examiner scoring variation.

Results
A total of 128 questionnaires were returned, with a response rate of 69%. No examiner within this cohort was identified as being extreme. No individual factor was significantly associated with examiner variation. However, there was a trend for more junior examiners to display “hawkish” behaviours.

Discussion and Conclusion
It was reassuring that we did not identify any extreme examiners among our cohort. There were no examiner specific factors identified to explain the variation that did occur. It is likely that examiner bias and variation is reduced by pre-exam examiner workshops and online e-learning packages.

References:
Google+ groups: An effective way to assess reflection in General Practice and Primary Care

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Background and Purpose
Reflection is an essential professional competence in medicine¹ and so it is a skill both taught and assessed by medical schools.² As part of the General Practice and Primary Care (GPPC) curriculum at Dundee University second year medical students have been required to submit a piece of prose, a poem, or a piece of artwork relating to their ‘Diabetes Experience’ to demonstrate their ability to reflect. Tutors frequently report that, even with marking guides, these can be challenging and time consuming to mark. There was a general awareness that promoting reflection on activities as an individual task potentially limits the degree of learning compared to collective reflection.³ In addition to this it does not mirror the day to day real life reflection of practitioners which is more longitudinal and embedded in daily life, and it is this that we are trying to teach. This study seeks to explore an alternative method of demonstrating and assessing reflection in a longitudinal and collective manner.

Methodology
This year we have piloted an alternative method of demonstrating and assessing reflection with one second year group of eight students. A closed google+ group ‘GPPC Ponderings’ was created and students were encouraged to post thoughts, comments and questions relating to all aspects of the GPPC curriculum throughout the year. The role of the tutor was to post questions in response to student posts to prompt further and/or deeper reflection. At the end of Semester one when students would have had to submit course work the blog was independently analysed to assess for reflection and provide some feedback for both students and tutors. A focus group will be held with the students involved to gain their feedback and the method will be presented to other GPPC tutors.

Results
The full evaluation has yet to be completed but findings so far are that this Google+ group has been: effective in allowing students to demonstrate their ability to reflect; positively received by students, less time consuming for the tutor involved and has created a discussion among the group that didn’t exist with individual pieces of work.

Discussion and Conclusion
We propose that Google+ groups are an additional option to be considered when choosing methods for students to demonstrate their ability to reflect.

References
Using regular formative assessments to drive learning: Do the benefits outweigh the added pressure on medical students?

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Background
Third year medical students at Bristol University attend Yeovil District Hospital to study medicine and surgery for 9 weeks. Here they receive clinical skills teaching, bedside teaching, and consultant lead tutorials. During this time they undergo a transition from didactic lecture based teaching to becoming independent self-directed learners. With inpatient numbers dwindling and increasing numbers of medical students in a healthcare system there is increasing pressure on students to seek effective learning opportunities. Formative assessment can reinforce student’s intrinsic motivation to learn and inspire them to set higher standards for themselves1. We sought to derive a method by which students could identify their weaknesses in knowledge and then address these issues whilst still on placement, encouraging self-directed learning. This was achieved by weekly formative quizzes covering common conditions that students would be expected to know. Answers were discussed immediately afterwards. We aim to encourage self-directed learning as a means for gaining skills for future use and establish whether students benefit from weekly formative assessments or whether it’s too much added pressure on an already busy schedule.

Methodology
Two cohorts of students were included. Both received the same teaching from medical staff. The first cohort received an end of attachment quiz only, while the second cohort received weekly formative quizzes. They had both received equal exposure to hospital medicine. A focus group was used to gauge the perception on the use of quizzes. End of placement quiz results were then compared. Quantitative data from the quiz will be statistically analysed whereas common themes from qualitative data will be sought.

Results
Pilot results have showed positive responses with regards to weekly assessments but with some suggested areas of improvement. Results of second cohort are pending.

Discussion
Weekly assessments help to deepen knowledge by additional self-directed learning. They offer the opportunity for real time learning and immediate change of practice. Although assessment has been found to drive learning2 its purpose needs to be made explicit in order for it to be beneficial. GMC’s ‘Tomorrow’s Doctors’3 recommends that students need to have clear guidance about what is expected of them with regards to assessment. This was reflected in our feedback. What seems of utmost importance is achieving assessments that balance high levels of learning with relatively low levels of stress.

2. Wood T. Assessment not only drives learning, it may also help learning. Med Educ 2009;43:5-6.3.
Student examiners: Can peer assessment be used to improve Medical Student performance and anxiety in the Objective Long Case?

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Background and Purpose
Peer assessment has been used to achieve multiple aims and is often used to increase student engagement. It teaches students both to be assessors and to be assessed and can help familiarise students with the assessment process.1 The Objective Long Case (OLC) is an assessment that can have poor reliability.2 Students may suffer anxieties relating to the variability of the examination. This study sought to qualify the root of anxieties and attempt to address them through the use of Peer Assessment in “Mock” OLC examinations. We hypothesise that students will find both the experience of being assessed by their peers in mocks and the experience of assessing their peers equally useful in reducing examination anxieties.

Methodology
Ethical approval was sought and granted from the University of Bristol. Exploratory focus groups were conducted with Medical Students in Gloucestershire Academy, University of Bristol. Focus group data was used to assess students’ perceptions of the OLC and validate subsequent intervention. Peers then assess one another performing mock OLC assessments with a Clinical Teaching Fellow supervising. Feedback will continue to be collected using a Likert scale on a questionnaire validated by the focus groups. This will study the student experience as both assessors and ‘assessees.’ The effect of the intervention on reducing students’ anxieties will be also measured.

Results
Preliminary focus group data revealed perceptions that the OLC was an unreliable and unfair assessment as it was subject to significant marker variability, variability due to factors inherent in the assessment design and ‘on the day’ student performance variability. Objective feedback will be presented with results on the perceived usefulness of the intervention, both as a learning tool and to reduce anxiety around the examination.

Discussion and Conclusions
Students perceive the OLC as unreliable, and this causes anxiety. If this anxiety is significant then it has the potential to contribute to the unreliability of the examination itself. Preliminary data indicate that when students are asked in advance how useful they perceive their assessment of a peer’s mock OLC to be, versus how useful it is to undertake a mock OLC themselves they do not feel it is of value to observe another. However post session feedback data does not always corroborate this. In addition it is likely that involvement in mock-assessing their peers confers additional benefits beyond those perceived by the students and in this area further work could be conducted.

I’ll know it when I see it: Looking at the ability of 3rd year medical students to identify and explain the clinical significance of peripheral clinical signs.

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Background and Purpose
Information accumulated from the patient history or physical examination forms the foundation for clinical decision making. Mistakes made in the identification or interpretation of this clinical information could potentially result in misdiagnosis or inappropriate treatment, thus compromising patient safety. The main aim of this study is to check if 3rd year medical students can correctly identify a range of peripheral clinical signs and then explain the clinical significance of these signs. A further aim is to review how confident students are at identifying and interpreting these peripheral signs.

Methods
Thirty-eight 3rd year University of Bristol medical students studying at Gloucestershire Academy will be invited to attend a session on ‘Peripheral Clinical Signs’ towards the end of a three month Medicine and Surgery placement. Under exam conditions, the students will be shown a 16 question PowerPoint picture quiz and asked to write their answers on a prepared answer sheet. Each question is divided into two parts; the first part will ask the student to identify the sign, the second part will ask the student to explain the clinical significance of the sign. Following this, the students will be given a teaching session based on the clinical signs included in the quiz. Before and after the teaching session, students will be asked to complete a 6 point scale questionnaire to measure their confidence in both the identification and interpretation of clinical signs.

Results
Full results will be presented and discussed at the AMSE conference 2015 as well as its implications on future teaching for medical students.

Conclusion
Gathering and interpreting clinical signs has been highlighted as an important part of patient care. If the students are unable to correctly identify and interpret these signs, reflection on current teaching methods is required with a view for further intervention.

References
The evaluation of student perception of formative assessment provision and demand in the pre-clinical medical curriculum.

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Objectives
National Student survey data shows that medical students are dissatisfied with the standard of formative assessment in Dundee University Medical School. Student opinion was surveyed to gauge current understanding of formative assessment, the materials available, students’ perceptions of unmet needs, with the aim of improving formative processes, and ultimately to improve student satisfaction.

Methodology
A survey was sent to all current and graduating medical students in June 2014, with the option to complete the survey and leave additional comments including a final ‘any other comments’ open question. Students were asked what formative tools they felt they had used, naming University developed materials, and any resources purchased from third parties. They were asked to rank their reasons for using formative tools.

Results
115 students responded. Respondent data showed that students were confused over what constituted formative assessment, that students prioritised exam preparation rather than improvement in overall performance, and the wide range of existing formative opportunities did not address this need.

Survey feedback indicated that students value (in decreasing order) the use of formative assessment to see where gaps in knowledge exist, for pre-exam self-assessment, continuous self-assessment, to gauge the required standard and experience the exam format. Experiencing exam conditions, comparison to peer performance and, surprisingly, receipt of feedback were seen as less important reasons for participating in exam-style formative assessment. Free-text responses suggested a need for expansion of the existing resources in order to provide adequate opportunity to test knowledge throughout the undergraduate curriculum.

Conclusions
The survey responses suggest that although students recognise the value of non-summative work and informal feedback, there is a need for reassurance regarding exam style, standard, and predicted performance. Students wish this to be available on-demand for self-assessment rather than formal mock examinations. Many students have paid for access to on-line formative resources (e.g. PasTest, Pass Medicine, OnExamination), but this discriminates against students who have limited access to additional funds, and does not allow for the idiosyncrasies of a particular institution’s curriculum or exam style.

This work highlighted the unmet need for a structured formative assessment program to simulate summative examinations. Future investigations into the perceived and actual value of non-exam based formative learning would make for an interesting comparison. Were additional resources made available, it may affect student satisfaction and reduce exam anxiety.
Can a student-written formative assessment in a summative exam style provide an adequate experience for students?

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Objectives
Formal responses to feedback and anecdotal evidence suggested there was demand for additional exam-style questions for students to use as a learning tool throughout the curriculum. This project provided students with a series of assessments in the year 1 autumn term of 2014 to address a gap in existing learning tools in the Dundee medical curriculum. Although other student-generated resources exist, this project differs in that it was delivered as part of the course and was written by a 4th year student based entirely on lecture content.

Methodology
A bank of questions in EMI (extended matching item) format was written by a senior undergraduate student to complement the first year respiratory curriculum in the autumn term 2014. In total, 89 three part questions formed the complete question bank. 6 questions were drawn at random from the question bank at each formative assessment attempt. Attempts were unlimited. A further set of questions, chosen at random from the entire question bank was accessible at the end of the respiratory block. No answer logic was provided, as local student feedback on formative assessment did not prioritise immediate feedback following formative assessment; questions were drawn directly from lecture material to allow for targeted revision. The assessments were available from the start of the block and will remain available throughout the undergraduate curriculum. Any academic or technical issues with the resource could be raised online through the DundeeMBChB VLE (virtual learning environment) or directly with tutors.

Results
169 participants enrolled into the online VLE, this included 35 students from other years within the medical school. Usage data shows multiple attempts with grades improving on repeated attempts. Participation was optional, but uptake and repeated use by a core cohort of students occurred throughout the six-week pilot. First/total attempts at each week’s questions were 107/295, 77/166, 73/152, 60/117, 42/63, 31/47, 21/31. Average initial/overall scores were 57.37%/69.32%, 44.37%/52.82%, 60.24%/66.22%, 44.72%/57.00%, 67.99%/72.92%, 68.28%/75.10%, 67.46%/67.69%.

Conclusions
A student developed, and online delivered optional formative assessment for 1st year students was used by over 50% of the student body. Many students re-sat the formative assessment multiple times. Feedback from those who used the formative assessment was positive. However there remains 30% of the student body who did not take advantage of this resource.

Additional work looking at the data gathered from the DundeeMBChB VLE system will allow for further interpretation whether such a resource can help predict summative exam performance.
Student and Staff Perceptions of Professionalism Assessment

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Background and purpose
Professionalism is currently a hot topic in undergraduate medical education (Goldie 2008; Cruess & Cruess 2012; Birden et al. 2014), with the GMC’s Tomorrow’s Doctors (General Medical Council 2009) document stipulating the need to teach, and thus assess it. The aim of this study is to explore the perceptions of students and staff with regard to the methods of professionalism assessment used at Dundee University Medical School; with the hope being that the results may influence future development of assessments.

Methodology
An exploratory case study approach is being taken; with focus groups being used to gather data from students (year 1-5) and semi-structured interviews being used for staff. There will be a brief summary of the current GMC expectation (General Medical Council 2009) and methods of professionalism assessment which may help to meet this need.

Results
Results for this study are currently pending. Data collected from participants of focus groups and semi-structured interviews will be presented for discussion, as will the resultant thematic analysis.

Discussions and conclusions
The presentation will offer the chance to discuss the results of this study, including some discourse around potential future developments for designing assessment methods as part of an integrated professionalism curriculum. Ascertaining how students perceive professionalism assessment is a core component of this study, hence engaging students in the assessment methods described may be a key point for discussion.

References
Undergraduate Medical Education – Teaching and Learning
Using an interactive workshop to improve death certification skills in our medical students.

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Background and Purpose
Complete and accurate death certificates are essential for high quality mortality data, which is used to form the basis of evidence based epidemiological evaluations. However, death certificates are often completed inaccurately and it has been observed that inadequate performance of doctors in the medical certification of cause of death (MCCD) is a principle reason for inaccurate data\textsuperscript{1-6}. Our foundation doctors are expected to be proficient in death certification skills from day one, and a recent local audit demonstrated that only 12.5% of junior doctors felt adequately trained in this area\textsuperscript{7}. A previous local research study using ‘low-fidelity simulation for death certification skills teaching’ in final year medical students demonstrated an improvement in our student’s skills, however, a number of errors remained in completing the MCCD\textsuperscript{8}. The aim of this project was to determine whether an interactive workshop is more effective and an acceptable method of teaching death certification skills to final year medical students.

Methodology
An interactive workshop was designed to teach 33 final year medical students in small groups. 33 students took part in the teaching. Students were asked to independently complete a death certificate for a simulated case at the beginning of the session. A workshop exploring death certification skills, including group discussions, case discussions and low-fidelity simulation, was carried out. Following the teaching the students completed a death certificate for a further simulated case. The number of errors on the certificate were counted and compared to determine whether an improvement was made over the course of the teaching. Performance for individual students was also compared. After the session the participants were asked to complete a questionnaire using a 10- point Likert scale. Free text boxes were also provided for reflection, which allowed for exploratory thematic analysis.

Results
33 students attended the teaching. The overall quality of the teaching was rated 9.4/10 and the average improvement in confidence to complete a MCCD following teaching was 5.5 points on the Likert scale (p value <0.0001). The average completion of the MCCD before and after was 62% and 94%, respectively (p value <0.0001).

Discussion
Death certification skills are not routinely taught at undergraduate level. However, as a foundation doctor they are expected to be proficient in this area. We can determine that an interactive workshop, including low- fidelity simulation and case-based discussions, can result in effective learning and improved performance in this area.

References
8. Taylor VM, Masiello M, Hawkins A,
Using simulation to improve standards of documentation in patient records by undergraduate medical students preparing for professional practice.

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Background and Purpose
Documentation of doctor-patient encounters serves two main purposes. Firstly, it directly affects patient care, and secondly, it is a medico-legal record. Therefore the quality and completeness of doctor patient encounter documentation is of the utmost importance. The General Medical Council (GMC) recognises the need to record your work clearly, accurately and legibly. On ward rounds the complete documentation can be challenging due to multiple factors and large studies in the UK have showed that there are major deficiencies in junior staff documentation. The aim of this project was to determine whether an interactive workshop with high-fidelity simulation is an effective and appropriate means to teach students proper documentation skills.

Methodology
A workshop was designed to teach the final year medical students in Swindon Academy. The teaching session was carried out 6 times with groups of 5 or 6 students. Students were independently asked to completed a ward round entry while watching a video. Documentation for each student was compared to the GMC recommendation for clinical records to include: relevant clinical findings, decisions made, information given to patient, treatment prescribed and who is making the record and when. A teaching session covering documentation skills, including high-fidelity simulation scenarios, was carried out. The students were then asked to complete a further ward round entry while watching a video at the end of the session. Performance was compared to the standards at the beginning and end of the teaching session. Student confidence in documentation skills before and after the teaching will be assessed using a questionnaire and 10-point Likert scale. Free text boxes will also be included to gain qualitative data.

Results
31 students attended the session. A statistically significant improvement in awareness of the standards of documentation was found, with a mean of 9.0/10 at the end of the session. Performance of documentation had a positive trend from beginning to end of the session, with a statistically significant improvement in documentation of patient details and decisions made (p value 0.0001 and 0.004 respectively). Additionally, students felt it was a realistic way to develop prioritisation and clinical judgement skills.

Conclusion
Simulation is an effective way of delivering training and is well established for developing clinical and non-clinical skills.

References
2. General Medical Council. Good medical Practice: Record your work clearly, accurately and legibly. London: GMC 2013
Bedside Teaching: Student Opinion of Specialists v.s Non-specialists

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Background
Bedside teaching (BT) is a valuable learning experience for medical students. In 2010, the BT curriculum at the University of Dundee was revised so that clinical specialist doctors facilitated these sessions. The aim of this study was to compare student opinion of BT delivered by specialist and non-specialist doctors.

Methods
A retrospective survey was sent to two medical student year groups who received teaching delivered by either specialist or non-specialist doctors during Year 2.

Results
A 24.5% response rate was achieved, of which 49.4% were taught by specialists. Responses indicated that specialist doctors improved communication skills (p = 0.034), were less intimidating (p = 0.01) and gave greater opportunity to ask questions (p = 0.028) than their non-specialist counterparts. Overall, students taught by specialty doctors rated BT as more valuable (p = <0.001). A positive correlation was noted between the frequency of patient interaction and the overall value of BT (p = <0.0121). However, there was no significant association between the main teaching location and the overall value of BT.

Discussion
Findings indicate that specialist doctors provide students with a better understanding of disease processes. Several students from the specialist group noted that their tutors linked theory to practice. No significant difference was found between the two groups regarding whether teaching was at an appropriate level. Specialist doctors therefore allow a number of improvements over the use of non-specialist doctors for BT.
What can a safe effective clinical outcomes approach offer students in secondary care simulations?

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Background
Untimed simulated clinics in a general practice setting, focused on safe and effective clinical outcomes (SECO) and unobserved by faculty, were first developed and introduced into undergraduate medical student education in Otago, New Zealand in 2004\(^{(1)}\). These clinics offer students opportunities to make decisions, implement management plans and conduct complete consultations. Formative feedback is provided by the simulated patients based upon achievement of pre-determined outcomes from the patient perspective, and from faculty assessment of case presentation skills, medical records, prescriptions and other outputs generated within the consultation. In the 2013-14 academic year, Keele University School of Medicine piloted SECO clinics in a general practice setting. This approach was well received by students and it was decided to not only continue the primary care pilot project in the academic year 2014-15 but also to extend the pilot into a secondary care setting.

Aim
To determine what medical students value about the SECO approach in a simulated secondary care setting.

Method
Ethical approval for this study was obtained from the Medical School Research Ethics Committee. Six 90 minute SECO simulated ward sessions were conducted over an 18 week period. A total of 95 final year medical students were eligible to take part in the secondary care SECO sessions. Students completed an end of session feedback questionnaire and 8 students were invited to take part in each of two semi-structured group interviews immediately after their simulation sessions. Data collection is currently still underway but, when complete, thematic analysis of the questionnaires and the group interview transcripts will be undertaken.

Results
Preliminary analysis of data gathered so far (45 students) suggests that students highly value the educational experience. The completed analysis of all data will be presented at the conference.

Discussion
The preliminary analysis indicates that unobserved safe effective clinical outcomes clinics can offer additional educational value to final year medical students. Students considered the experience to be of benefit for a range of reasons including the challenging nature of the cases offered, increased realism in comparison to OSCEs and multiple perceptions of the benefits of not being directly observed. Additional themes arising from the data will be presented at the conference.

References
Improving the Ward Attendance of Final Year Medical Students – Is Responsibility the Answer?

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Background
There is currently little research into methods to improve ward attendance by medical students, particularly outside of timetabled teaching. This is important, as existing work has found correlation between clinical attendance and improved examination scores\(^1\). There are also decreasing opportunities for students to be involved in technical skills, with significant variation in what they have seen and done at graduation\(^2\); so attendance is key to maximising opportunity.

Methodology
We studied 20 final year Medical Students from the University of Nottingham undertaking placements in Medicine or Surgery at Nottingham University Hospitals NHS Trust. Students had volunteered to act as a mentor for a work experience programme organised by a student group (WAMS Nottingham). We surveyed the Medical Students after the week to look at their attendance habits normally and then during the week. We also asked them reasons for any change in their attendance.

Results
Students reported spending a mean of 4.50 hours on the wards normally outside of scheduled ward-based teaching, with this increasing by 1.90 hours to 6.40 when they had a work-experience student shadowing them (\(P=0.003\)). They reported the main reasons for this as responsibility to their mentee, to practice teaching and their own interest in spending time on the ward.

Discussion and Conclusions
We conclude that a potential solution to increase the ward attendance of final year medical students would be to give them a specific task or responsibility whilst on the ward. Given the small sample size and notable potential for bias in this study, future research is needed to consider what form of responsibility should be used and whether it is transferable to all final year medical students.

References
To establish how different group sizes affect students learning basic surgical skills.

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Background and Purpose
The University of Leicester’s Surgical society (SCRUBS) run basic suturing skills courses throughout the year. Students are often taught in small groups of varying sizes. We wanted to investigate whether if different group sizes affect students’ learning basic surgical skills.

Methodology
A basic suturing event was held for 36 first year medical students without prior suturing experience. Students were randomly allocated into 1 of 3 groups: Group A, B and C, containing 2, 4 or 6 students per tutor, respectively. Students were then taught to carry out basic interrupted sutures in their allocated groups by senior medical students. Using a Likert questionnaire (scale 1-10), students were asked to rate their confidence in carrying out basic interrupted sutures at the end of the workshop. Data was analysed using one way ANOVA test.

Results
There were 12 students in each of the three groups. Students in Group A were the most confident in performing a basic interrupted suture (mean score 8.83), compared to those in group B (mean score 8.50) and C (mean score 6.583). Group A students were significantly more confident by the end of the session compared to those in Group C (mean difference 2.250, 95% CI 1.098 to 3.402). Similarly, Group B students were significantly more confident by the end of the session compared to those in group C (mean difference 1.917, 95% CI 0.7646 to 3.069). However there was no significant improvement in confidence levels when comparing students from group A and B (mean difference 0.33, 95% CI -0.818- 1.48, p>0.05).

Discussion and Conclusions
The results suggest that there is no difference in students’ confidence in performing learnt basic surgical skills when taught with a 2:1 student to tutor ratio compared to a 4:1 ratio. However, there is a significant reduction in students’ confidence levels in performing learnt basic surgical skills when there are 6 students per tutor.
Investigating the effectiveness of the 4 point teaching method compared to a “monkey see monkey do” approach

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Background and Purpose
The four point teaching method is becoming an increasingly used method for teaching clinical skills. Nevertheless, there is little evidence to suggest it being a more effective way of teaching skills. This study looks at whether if the 4 point teaching method is a better alternative to teaching basic surgical skills than the “monkey see monkey do” approach.

Methodology
Three basic surgical skills events were held for medical students without prior suturing experience. Students were taught in small groups of four by final year medical students. Each group was randomly allocated a teaching style: either the 4 point teaching method or a “monkey see monkey do” approach. Tutors received prior training in both methods before the events. The students had 20 minutes to learn to carry out a basic interrupted suture. Each student was then assessed by a blinded surgical trainee using a standardised checklist. Students were also asked to rate their confidence at carrying out a basic interrupted suture on a Likert scale from 1-5. The results were analysed using an unpaired T test.

Results
A total of 40 students attended the event and were equally divided into two cohorts. The first cohort were taught using the 4 point teaching method and the second cohort were taught using the monkey see monkey do approach. The first cohort had a mean score of 11.05 compared to the second cohort, with a mean score of 10.27. However, the difference was not statistically significant (p<0.4174). In the first cohort, had a statistically significantly greater confidence mean score (mean difference 1.14, p<0.0001).

Discussion and conclusions
The results suggest that the use of a 4 point teaching method is no more effective at teaching students basic surgical skills than the “monkey see monkey do” approach. However, students feel significantly more confident at performing basic surgical techniques after being taught by the 4 point teaching method. We will use the 4 point teaching method in future events due to the improvements seen in student confidence.
Evaluating the effectiveness of peer led revision sessions in teaching medical students reproductive medicine

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Background and Purpose
Reproductive medicine is considered as one of the more challenging subjects taught at medical school. We therefore wanted to establish whether if peer to peer revision sessions were an effective method to improving students' knowledge in reproductive medicine.

Methodology
4th and 5th year medical students ran peer led reproductive revision sessions for second year medical students. The sessions consisted of an overall lecture before students were taught group work questions in smaller groups. Students' knowledge of reproductive health was tested using a short answer questionnaire. The questionnaire was completed by all attending students prior to the start of the revision session and once again 6 weeks after. The results were analysed using a one way ANOVA test.

Results
The revision session was attended by 64 students. Fully completed pre and post revision session questionnaires were received from 61 students with 48 students completing the 6 week follow up questionnaire. Pre revision session results had a mean score of 14.05 marks compared to 21.20 for the post revision session results and 17.92 for the 6 week follow up results. There was a statistically significant improvement in the post revision session questionnaire compared to the pre revision session questionnaire (mean difference 7.14 marks, 95% CI 5.160 to 9.135). There was an improvement at the 6 week follow up questionnaire compared to the pre revision session questionnaire (mean difference 3.86, 95% CI 1.750 to 5.985). There was a statistically significant decrease in the 6 week follow up questionnaire compared the post revision session questionnaire (mean difference -3.280, 95% CI -5.398 to -1.162).

Discussion and Conclusions
The results suggest that peer led education is an effective way to improve students' knowledge in reproductive medicine. The results also highlight the need for continuous learning in the subject in order to maintain a high level of knowledge.
Recognising the Sick Child: Evaluation of a Novel Simulation-Based Training Programme for Medical Students

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Background
Undergraduate teaching in paediatrics and child health offers a short window of opportunity to teach medical students essential skills in recognising and managing sick children. Death rates in the UK from acute illnesses such as asthma, meningococcal sepsis and pneumonia are higher than in comparable European countries. The failure to recognise serious illness at presentation is a recurring avoidable factor in many of these child deaths. In postgraduate education simulation has been used to facilitate the development of technical and non-technical skills in trainees, in a safe environment without compromising patient safety.

Methods
We developed a tailored undergraduate simulation-based programme focusing on the recognition, assessment and acute management of serious childhood illness. The programme consisted of an opening session, teaching students a structured approach to the acutely unwell child and four simulation sessions, delivered over a six-week period. We piloted the programme with 16 medical students enrolled in the integrated BSc in paediatrics and child health, and evaluated it using a mixed-methods approach. Outcome measures included students’ confidence in recognising, assessing and managing the sick child before, and immediately after the programme, then six months later. Students’ qualitative views on the simulation programme were also explored.

Results
The programme generated a highly significant increase in students’ confidence in recognising the sick child (2.81/5 before versus 3.88/5 after training; p<0.001.) Students also had significantly improved ability to assess the child with fever, rash or difficulty in breathing (three of the most common acute paediatric presentations,) and to recognise and institute initial management in common paediatric emergencies (p<0.005). Confidence levels remained high after six months, with only a slight drop off in the recognition and management of sepsis. Thematic analysis indicated students gained the following from the programme: increased confidence in recognising and assessing sick children, team-working and communication skills, a systematic approach to the acutely unwell child and increased confidence in a clinical environment.

Conclusion
A simulation-based programme is an exciting and effective method to introduce essential skills in the recognition and initial management of the sick child to medical students, and is highly valued by undergraduates. It also helps to develop important non-technical skills, such as teamwork and communication, and student’s confidence in a clinical environment.

References
Relationships in the training process that facilitate the self-directed learning in medical students from a Chilean university. A qualitative approach.

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Background and Purpose
Progresses in education have made it necessary to rethink the training process of medical students. Self-directed learning (SDL) is an important aspect considered in such training process\(^1\). SDL is a skill that is characterized by autonomy and self-regulation of learning. Therefore, it is essential to inquire about potential factors that could contribute to develop an independent learning\(^2,3\). This study aims to analyze the relationships that exist in the training process that facilitate self-directed learning in medical students from a Chilean university. (Sponsored by regular FONDECYT #11140654).

Methodology
This is a qualitative, descriptive study, performed according to Grounded Theory guidelines, following Strauss & Corbin\(^4\). 20 Chilean medical students from 4\(^{th}\) and 5\(^{th}\) year were selected by maximum variation sampling method\(^5\). The data collection technique was a semi-structured thematic interview. Students were personally contacted and after an informed consent procedure. The interviews were conducted by 7 researchers and the analysis by open coding method\(^4\) was performed by 3 researchers. The data were analyzed with Atlas-ti 7.5.2 software.

Results
There exist two kinds of relationships in the training process that facilitate the development of SDL. The first one is the relationship that exists between students, which allows the resolution of doubts, the consensus of bibliographical sources and the application of contents in group study. The second is the relationship with the teachers, characterized for being directive and based on the resolution of doubts and effective feedback, where the teacher specifies the subject matters of studies, the criteria of evaluation and the type of bibliographical sources.

Discussion and Conclusions
The relationship between students and between students and teachers could influence the way in which students learn. According to that, it is important to consider the way in which students apply what they learn with their peers\(^6\) and the feedback they receive from their teachers\(^7\). In this way, the relationship with other students or with teachers could encourage the learning process or could harm it. To develop SDL it is fundamental to consider the factors that facilitate it. This will allow establishing the conditions that can encourage an independent learning.

References
Building Blocks: A Child Health experience in Primary Schools

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Background
A new community teaching experience was designed to engage year two medical students to prepare and deliver two teaching sessions within local primary schools. The project builds on the already established partnership between Dundee Medical School, National Health Service (NHS) partners, Dundee Education Department and Primary Schools.

Purpose of Work
This collaborative project has embedded community engagement within the curriculum and encourages inter-professional education through multi-agency working. The experience builds upon students’ professional skills and facilitates their development as teachers. Students develop communication skills and the ability to play with young children as well as an awareness of child health, normal growth and development early in their medical career. The children have the opportunity to learn about their body through play and interaction.

Method
Working in pairs, students delivered health education activities to school pupils under the guidance of a primary school teacher. The activities are designed to meet the learning needs of the child through appropriate teaching materials in line with the Curriculum for Excellence. The activities include: Oral Health, It’s An Emergency/People Who Help Us, Broken Bones and Bandaging Station, What a Doctor Uses/Medication, Teddy Surgery, What’s Inside My Body.

Results
Feedback has identified the following themes: the value of the experience; teaching skill development; communication; overcoming challenges; preparatory session; future opportunities; career progression; teacher/pupil observation.

- “There is very little scope for this sort of experience as a medical student and it was extremely enjoyable and fulfilling. I also felt that it helped to develop particular skills in communication and patience which will be very useful later in our careers and lives” – Student
- [The most positive thing from this experience] “The fact that we could actually have a positive impact on the community as early as medical students” – Student
- “It was most interesting to have the opportunity to observe my children during their rotations and to take the time to watch them interact with unknown adults.” – Teacher

Discussion & Conclusion
The programme takes into account the integral values of medical education; practical teaching experience in a real environment. The project is an interactive and fun way to facilitate students, teachers and school pupils learning and in helping prepare the medical students for their child health experience in later years. It highlights the importance of multi-professional teamwork, widens access to medical education as well as promoting a health conscious attitude in the next generation.
What are the experiences of medical students on placement at a rural campus?

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Background
There is a worldwide shortage of rural doctors(1) contributing to poorer health outcomes for rural patients(2). Consequently the factors impacting on the decision to work in a rural environment is an important research area. The educational experience of students is important because it influences the career choice of doctors(3).

There have been qualitative studies on student experience of rural placements in Australia and South Africa but little in the U.K. These identified barriers to rural placements including: concerns about social isolation, logistical issues and less specialist teaching(4-6). Positive themes were frequently related to educational climate(4-6). Findings cannot necessarily be translated into the U.K therefore data collection in a rural U.K hospital is important.

Thematic related to educational climate influence rural students perceptions of their placement and it is known that a healthy educational climate is associated with higher student achievement(7). Strand et al(8) developed a new instrument to evaluate medical student's perceptions of the undergraduate educational climate. I plan to use this in English for the first time and triangulate with qualitative data.

Methodology
A social constructivist methodology will be used to answer the following research question. How do medical students describe the experience of undertaking a peripheral placement?

This study will be performed on students at the University of Aberdeen on placement in Inverness and the surrounding hospitals. An educational climate survey instrument will be administered to approximately 110 students. Data will be analysed by using descriptive statistics.

Qualitative semi-structured interviews will be performed using purposive to select potential students. Interviews will be conducted until data saturation is reached. A thematic approach to analysis will be used. In addition a narrative analysis approach will be used to determine the life experience on placement of the students interviewed. This will be triangulated with the data from the survey.

Conclusion
This study aims to determine what aspects of the educational climate and placement experience are perceived positively and negatively by students which could be addressed to improve student experiences on placement. Developing areas perceived negatively may improve student learning and potentially contribute to rural recruitment. Aspects perceived positively should be maintained and could be used to promote rural placements. In addition this study will contribute to the validation of a new instrument measuring educational climate in English.

References
Presenting on the post take ward round: a tool every medical student needs.

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Background and Purpose
By the time medical students complete their undergraduate training, they often feel ill-prepared to present and this is a significant source of stress and anxiety\(^1,2\). From their first day as a newly qualified junior doctor, they are expected to present patients coherently and confidently in clinics, on ward rounds and at emergencies. However, despite being a near essential skill, and one a trainee uses throughout their career, very little formal undergraduate teaching is invested towards mastering the art.

Methodology
A cohort of 2\(^{nd}\) year medical students towards the end of their clinical placement participated in the following:
1. Students completed forced-choice and open space questionnaires aimed at identifying their attitudes towards presenting.
2. 30 students attended 8 small group sessions (2 – 4 students) over a 2 week period where they each presented as they would on a ward round, followed by a dedicated feedback sessions. A clinical discussion of the case was also had.
3. Post-intervention satisfaction questionnaires were collated in a similar manner to delineate whether this had a positive impact on their ward experience.

Results
30 students took part in the presenting sessions, and 20 students completed the questionnaires (67%). The preliminary questionnaire showed that 95% of students (19) had either ‘seldom’ or ‘never’ presented a patient. 80% said that had therefore ‘seldom’ or ‘never’ discussed their histories. Although the majority of students felt able to take a history, half felt they lacked the confidence to present; and even fewer felt they received useful feedback on the presentation itself. Only 30% of students felt they had an in-depth understanding of the patients they clerked. Results of the 2\(^{nd}\) stage questionnaire showed that 100% of students agreed that they felt more able and confident to present. Themes that emerged include, the confidence to now present in clinical situations and the enjoyed freedom to present and make mistakes at these teaching sessions, (they described feeling embarrassed to do so in front of their firm consultant).

Discussion and Conclusions
Students shy away from presenting as they are not equipped with the tools to do so. This in turn will limit their ability to discuss their patients, and therefore act as a barrier in gaining a more in depth clinical and social understanding of each case. Introducing a presentation skills teaching programme for students early in their training is both feasible and well-received by students.

References
2. F. Moss, I. C. McManus. The anxieties of new clinical students. Medical Education. 1992; 26: 17-20
3. “Examining for Finals” - an Innovative Teaching Programme to Improve Medical Students’ Formulation and Presentation Skills
“Examining for Finals” - an innovative Teaching Programme to Improve Medical Students’ Formulation and Presentation Skills

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Background
Clinical examination skills are regularly tested by objective structured clinical examination (OSCE), and are often a dreaded aspect of medical student finals. A vital aspect of these exams includes formulating a differential diagnosis based on findings, and presenting these to the examiner¹. As recent graduates of The University of Edinburgh, we observed that these elements were not formally covered by the MBChB curriculum².

Aims
To create an innovative teaching programme aimed at final year medical students to 1) identify important clinical signs and patterns and answer common questions about these, 2) provide a structure on how to present findings, 3) improve students’ clinical knowledge and confidence around the clinical examination, 4) complement bedside teaching.

Methodology
A series of presentations were developed to guide small group teaching sessions. Each hour long tutorial follows a standardised structure. This starts with an introduction and quick refresher of the examination scheme using buzz groups followed by a demonstration. A schemata to follow when presenting clinical findings is shown. An interactive question-answer format is then utilised to cover the commonly encountered findings and exam questions surrounding these. Then students have the opportunity to practice their presentation skills using a clinical vignette. It concludes with a summary of the session and an opportunity for questions. Feedback was collected at the end of sessions via feedback forms containing 5-point rating scales and free text responses. Pilot sessions were ran covering cardiology, respiratory and gastrointestinal systems.

Results
Seven pilot sessions were taught to 75 students between February and May 2014. Feedback showed 60% of students “strongly agreed” and 38% “agreed” that session objectives were met. Free text feedback was also positive. Constructive feedback included a desire for a copy of the presentation, therefore a worksheet was designed. Pilot sessions received positive responses from observing Clinical Teaching Fellows. Our programme has been incorporated into the “Postgraduate and Undergraduate Learning in the South East” (PULSE) programme through which tutors can be formally accredited³. We now have over 20 tutors teaching throughout South East Scotland, covering seven systems.

Conclusions
The feedback from pilot sessions illustrated ‘Examining for Finals’ is an effective teaching programme for developing presentation and formulation skills by utilising a variety of established methods for small group teaching. This teaching is now readily accessible to students through PULSE. Scope for the future includes expanding to cover all examination systems and to reach other medical schools.

References
2. Eemec, 2014. MBChB Curriculum, viewed 22/1/15. Available at: https://www.eemec.med.ed.ac.uk/curriculum
A structured course improves knowledge and confidence of applicants to the UK Academic Foundation Programme

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**Background and Purpose**
The UK academic foundation programme (UKAFP) provides opportunity for engagement in research, teaching and management, alongside core clinical competencies outlined by the Foundation Programme Curriculum. Although the process is highly competitive and often the first interview experience since applying to medical school, few institutions provide support for their students in the form of interview preparation. The benefits of near-peer teaching have been well described in the literature. Our aim was to assess the educational impact of near-peer teaching in the context of a free two-day structured preparatory course for UKAFP interviews.

**Methodology**
Final year medical students in the South West of England and Wales were invited to attend. Interactive teaching sessions and small group workshops covered core clinical and academic topics. A simulated interview process recreated common themes and challenges of UKAFP interviews. Delegate feedback was analysed using descriptive statistics. Free-text responses underwent thematic analysis.

**Results**
Feedback was completed by all 20 delegates (100% response rate). All 20 strongly agreed that they had benefitted from attending the course. 19 (95%) reported improved knowledge of the interview process and increased confidence in approach to upcoming selection. Thematic analysis highlighted multisource feedback in simulated interviews and interactive engagement in skills workshops as particularly beneficial.

**Conclusions and discussion**
A targeted near-peer teaching programme can provide a useful adjunct to preparation for UKAFP interviews.
“Happy Hospitals:” A novel card game to educate undergraduate medical students on the wider hospital workforce

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Ethical approval was not required for this study.

Background and Purpose
Inter-professional collaborative practice is at the forefront of the literature with respect to improving patient outcomes and the provision of holistic care. Such effective collaboration is underpinned by an appreciation of specific role expectations and professional contributions of health care professionals to the team. The General Medical Council advises that doctors “must work collaboratively with colleagues, respecting their skills and contributions.”

Undergraduate medical teaching on roles within the multidisciplinary team is often limited to the immediate ward based team and not inclusive of the wider hospital workforce.

The aim of this study was to:
1) Assess students’ knowledge of roles within the wider hospital workforce.
2) Develop students’ understanding of roles within the wider hospital workforce.
3) Explore the use of a novel card game to deliver teaching on the wider hospital workforce.

Method
15 third year medical students from the University of Bristol based at Gloucestershire Academy were study participants.

Students completed a 25-question written quiz assessing their knowledge on roles within the wider hospital team. The quiz was based upon NHS Careers descriptions of hospital roles and had been peer reviewed.

In smaller groups, students played “Happy Hospitals;” a card game created, based on the children’s game “Happy Families.” There were 50 cards in total. Each card represented a different member of the healthcare workforce. Cards included a cartoon depiction of the team member and an explanation of their role based on NHS Careers descriptions. Students traded cards to collect as many ‘families’ of health care professionals as possible. Different coloured cards denoted ‘families’. For each card trade, the card description was read aloud. Students played for 30 minutes.

After playing “Happy Hospitals,” students completed the same written quiz on different roles within the wider hospital team.

The students also completed an evaluation form asking their enjoyment of the game, its relevance to their practice and suggestions for improvement.

Results
Analysis of pre and post-test scores alongside student evaluation and comments will be presented.

Discussion and Conclusion
Collaborative, respectful relationships based on trust have been shown to promote individual and interprofessional team competence. For such relationships to exist, it is imperative that undergraduate medical students receive teaching on the wider hospital team and develop an appreciation of roles. “Happy Hospitals” is a fun and exciting way to introduce medical students to this fundamental professional responsibility.

References

Does ‘fun’ enhance learning in simulation training? The Zombie Apocalypse themed simulation session: silly or spectacular?
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Does “fun” enhance learning in simulation training? The Zombie Apocalypse themed simulation session: silly or spectacular

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Full ethical approval was granted for this study.

Introduction and Purpose
Medical educationalists have debated the use of fun and humour in teaching for many decades.\footnote{1} In attempt to motivate and impassion students, exciting teaching methods are introduced and didactic lectures abandoned. But does fun enhance learning?

In the words of Sir William Osler, “Hilarity and a good nature [and] a breezy cheerfulness help enormously in the study and in the practice of medicine.\footnote{2}”

Gifford et al presented the use of (1) Encouraging Learning, (2) Entertaining People, and (3) Having a Nice Time, the ELEPHANT criteria, as powerful tools in medical education.\footnote{3} In addition, the Oxford CAL study concluded that enjoyment might be associated with deeper learning, better performances and improved self-esteem.\footnote{4}

The aim of this study was to explore whether learning and knowledge retained in simulation training is improved by creating fun, fictionally themed scenarios based on a “Zombie Apocalypse.”

Method
28 fifth year medical students from the University of Bristol based at Gloucestershire Academy were divided into two groups. Groups completed a peer reviewed quiz using “TurningPoint;” an electronic voting system. The quiz was based on simulation scenarios to be covered.

Group A received traditional simulation training covering three acute medical scenarios. Scenarios lasted 45 minutes and 15 minutes debriefing. Group B received the same clinical scenarios embedded within a “Zombie Apocalypse” theme. For example, Group A received “Hypovolaemic shock” in the context of a post-operative patient. Group B received a patient who had been bitten by a “Zombie” and had signs of hypovolaemia. In both scenarios, learning objectives were identical but the scenario themed differently.

Following the sessions, students repeated the knowledge based quiz and completed evaluation forms.

To establish any differences in knowledge retained, students completed a knowledge quiz, based on the scenarios, five weeks following the simulation sessions.

Results
Pre and post-test scores, results from the knowledge quiz five weeks post simulations and student evaluation will be presented.

Discussion and Conclusions
The times of didactic lecture-based teaching are becoming increasing less popular in the world of medical education as we reflect on educational theory and the growing research body supporting active teaching methods. We must endeavor to provide education that captivates our students and enthuse them with humour, entertainment and games. This study explores the use of themed fictional simulation in an attempt to facilitate deeper learning.

References
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\footnote{3} Gifford H, Varatharaj A. The ELEPHANT criteria in medical education: Can medical education be fun? \textit{Medical Teacher}, 2010. 32: 195–197
Student and faculty experiences of pre-clerkship rural community placements

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Background
The Northern Ontario School of Medicine offers place-situated educational programs which train physicians to practice medicine in the vast and sparsely populated region of Northern Ontario in Canada. The first clinical experiences of learners in the MD program take place during a four week community placement situated in a small community. The overall goal of the placement is to build student’s identity as future rural doctors. During the placement students are expected to engage in their regular learning about body systems and other topics (termed ‘academic sessions’) but also to spend time in clinical and social settings in the community.

Methodology
This study aimed to better understand the experiences of students on placement as an initial step in evaluating whether the experience achieves its stated aims. To accomplish this we firstly reviewed the foundational documents of the program and interviewed those who held senior positions during its establishment. This was used to develop an understanding of the intent of the placements which guided the construction of questionnaires completed by student participants before the placement and focus groups conducted after their return. Interviews with the community-based clinical faculty who hosted the learners were also conducted. The collected data was analysed using an iterative interpretivist approach from which various themes emerged.

Results
Both students and faculty intimated that the placements were rich experiences resulting in students becoming more knowledgeable about rural health care systems, gaining hand-on clinical experience prior to the clerkship years, increasing their comfort with learning in such contexts, and assisting in their development of an identity as a future Northern Ontario physician. In contrast, independent community exploration or organized social activities were a minor part of most student’s experience. Our data suggest that this occurred due to students not having enough time for such activities with clinical time and academic studies taking priority. In keeping with this faculty reported that training such early-stage learners although rewarding reduced their own ability to perform clinical duties.

Conclusions
We conclude that while 2nd year placements are a useful part of the process of building a rural doctor, more emphasis needs be placed on living successfully in place as physicians. We suggest this is accomplished by ensuring an appropriate balance between clinical, academic and social/community experiences and incorporating opportunities for guided-enquiry and facilitated reflection of what it means to be a physician inhabiting a particular place.
Preparing year 4 medical students for the apprenticeship year using SBME (Simulation Based medical Education)
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Background and Purpose
Medical students highly value SBME (Weller 2004), particularly the opportunity to develop teamwork skills, a systematic approach to clinical problem solving, and to apply their theoretical knowledge in a safe and realistic setting. The repeated exposure allows the learner to build mental models of the A to E assessment, thereby bridging the gap between theory and practice that currently exists in medical education.

The programme:

Induction:
- Recap clinical skills with part task trainers
- Session on Team Resource Management (TRM).

Simulation:
The year 4 programme consists of 5 simulations. With a gradual increase in clinical complexity, aiming to stretch the student’s clinical ability whilst in the safety of a peer group.

Students are divided into 2 groups:
1. Observing and assisting in debrief whilst the other group completes the simulation.
2. Simulation exercise containing similar themes (but a direct replication).

The groups will then interchange.
Instructors facilitate the videoed debrief so that the students themselves acknowledge suboptimal practices, aspects of TRM, and suggest alternative approaches. Students gain skills in feedback and agree to the learning outcomes prior to the next session.

Methodology
This is a service evaluation to ascertain whether the 4th year simulation programme aids bridging the gap between theory and practice, and moves them along the novice to expert continuum in terms of both TRM and clinical practice.

<table>
<thead>
<tr>
<th>Scenarios</th>
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<td>Themes</td>
<td>Anaphylaxis</td>
<td>Acute Management</td>
<td>Massive Bleed</td>
<td>Respiratory</td>
<td>Neurological Impairment</td>
</tr>
<tr>
<td>Group 1</td>
<td>IV Drug reaction</td>
<td>Sepsis</td>
<td>GI bleed</td>
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<td>Group 2</td>
<td>Bee sting</td>
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Results
The students were given an evaluation form using a likert scale rated from 5-1 (5 being high). The questions asked if they felt the scenario met their learning needs, if they felt more confident in dealing with the particular scenario, if they felt the feedback was effective, and if their knowledge base was sufficient. 88% of the students rated the SBME at 4 or above with only 2.25% rating it at 2 or below. All respondents commented that the programme increased their confidence, allowed them to make mistakes in a safe environment, and helped significantly in practicing their A ->E assessment.

Discussion and Conclusions
As in previous studies, SBME scores highly in evaluations of student satisfaction. There are self-reports of practice improvement and effective translation into the clinical environment. The faculty report changes in team working and increased reference to TRM in patient safety. It is also felt that the learners will indirectly develop their critiquing and feedback skills as a result of the training.

References
Scaring the Bleep out of Medical Students

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Background and Purpose
Weller 2004 demonstrated that medical students highly value simulation-based learning. In particular, they value the opportunity to apply their theoretical knowledge in a safe and realistic setting, to develop teamwork skills and to develop a systematic approach to a problem. The UMUST programme was developed as a joint research project between St Helens & Knowsley Teaching Hospital and Blackpool Teaching Hospital (2011), its aim was to prepare final year medical students for Foundation Year 1 (FY) by creating an on-call simulation experience. UMUST provides a more realistic experience of being called to medical emergencies, providing insight into how the student may perform within a team and exploring both technical competencies and the importance of human factors.

The Programme
The medical students carry a bleep for a week (on 5 separate occasions), and are “bleeped” to a critically unwell simulated patient. This provides the student with the experience of the unpredictable and unplanned nature of patients recreating the physical and psychological elements of an emergency situation.

Methodology
This is a service evaluation to ascertain whether a simulation programme prepares 5th years for Foundation, moving them along the novice to expert continuum in both human factors and clinical practice.

Results
The students were given a standard evaluation using a likett scale rated from 5-1 (5 being high). The questions asked if they felt the scenario met their learning outcomes, if they felt more confident in dealing with the particular scenario, if they felt the feedback was effective and if their knowledge base was enough. 96% of the students rated the SBME at 4 or above, with only 4% rating it at 3 or below. All agreed that their confidence grew in using the A->E framework. All said that it really helped when doing the ALS course, and in giving feedback to colleagues. Doing UMUST allowed them to recall what had happened in real scenarios and made them reflect on their practice. All of the students agreed that the programme helped in their A&E placement. The students recognised the consequences of not knowing how to deal with a sick patient.

Discussion and Conclusions
SBME evaluates highly in terms of student satisfaction. There are self-reports of practice improvement and translation into the clinical environment, especially their A&E experience.

References
Go directly to Jail; do not pass go; do not collect QoF money

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Although the concept of using games in education is not new, it is increasingly being recognised as a useful tool in medical education. When embedded within a curriculum, the use of games in medical education is recognised to enrich other teaching strategies and enhance adult learning\textsuperscript{1,2}. Games have been shown to be effective in the development of both technical and non-technical skills\textsuperscript{3}.

The concept of the game Monopoly was utilised in a novel way to introduce undergraduate medical students to areas of General Practice which are often difficult to teach elsewhere in the curriculum. These included aspects such as understanding different roles in the community team, knowledge of local services and the management of patients within a community setting.

A company producing ‘make-your-own-opoly’ packs allowed the creation of the GP-opoly game where students are able to ‘play’ at running their own general practice surgery. As students travel around the board they discuss and deal with the clinical problems that arise as if they were a local General Practitioner. As a group they interact and learn within a community of practice, as described by Lave and Wenger\textsuperscript{4}. The gaming aspect in particular encourages quieter students to move from being a peripheral participant to full participation.

At the University of Dundee the game was piloted with students during the general practice component of their second year. Focus groups were then conducted with the students to establish what learning had occurred and whether this was transferable and complimentary to their experiences in practice.

References
Feasibility study of a new learning tool that aims to develop both reflective practice and clinical reasoning skills in medical students.

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Introduction
Reflection is taught in undergraduate medical curricula using different learning tools. However, engaging students in reflection is challenging. Through consideration of factors known to affect student motivation, and following a review of the reflective and clinical reasoning literature, the theoretical and empirical basis for a new reflective learning tool is described. The ‘Stop and Think’ framework can be independently utilised by students during difficult patient encounters, with the aim of improving students’ ability to reflect whilst solving clinical problems, thus improving their diagnostic reasoning. The potential of the tool to improve students’ reasoning in exams as well as in practice is likely to motivate students to engage in its use.

Method
The Medical Research Council guidance for developing and evaluating complex interventions (2008) was applied to the design, development, pilot implementation and evaluation of the tool. The tool was piloted within a teaching session for Year 6 students at the end of a General Practice placement. Student and teacher perspectives of its acceptability and feasibility were explored. Seventeen students participated in three focus groups, and fifteen teachers responded to an emailed questionnaire. Data was analysed using a thematic framework.

Results
Overall, the results suggested that the tool is acceptable and feasible for use within a teaching setting and required minor modification for use in practice. Students perceived the tool to be relevant with regards to their exams and practice. Teachers reported that use of the tool improved the awareness of their own diagnostic judgements in practice.

Discussion
Further plans for evaluation the tool will be discussed, and feedback welcomed. These include assessing whether use of the tool changes students’ perceptions of reflective learning, and whether the tool improves students’ clinical reasoning skills. Finally, how the audience may be able to utilise the tool in their own teaching and clinical contexts will be discussed.

References
Enhancing Anatomy teaching in a clinical setting

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Introduction

The UK medical schools differ in their approaches to teaching, learning and assessment and are challenged to provide their students with an environment that facilitates the development of the knowledge, skills and attitudes to be ‘Fit for Practice’.

Effective use of educational theory, distance-learning and multi-media technologies to provide lectures is one way to continue to provide medical students with instruction in gross anatomy (1,2).

A clinically and functionally based approach to Anatomy teaching is a solution in the form of selected study modules or an adaptive curriculum based on student feedback and assessment.

Method

A two week time-table was designed for year 1 & 2 medical students in the Plastic Surgery Unit as a selected study module. This comprised lectures in Upper limb Anatomy given by trainee surgeons at the onset. This was followed by shadowing of junior doctors to assess hand trauma cases and admit patients for surgery. In addition, attending hand clinics for elective referrals and post operative care of patients. The student was able to follow the patient to theatre and observe the anatomy of the injured hand at operation. The theatre computer was used to provide an on-line atlas as an aide memoire. The post-op care of the patient was observed including the post-op rehabilitation.

Results

Feedback from the medical students confirmed satisfaction with the selected study module. Assessment of the students will be discussed.

Conclusions

The aim of this novel method of teaching anatomy of the upper limb is to emphasize the importance of correlating knowledge of basic anatomical skills in solving clinical problems. The limitation of a two week study module is that the student is only exposed to limited Anatomy dependent on the type elective and emergency cases. Nevertheless, the whole of the upper limb Anatomy can be covered with visual aids such as interactive Anatomy CD’s. Further refinements anticipated is the use of operation videos to show cases demonstrating complex anatomy. The junior doctors are able to learn teaching skills in order to provide Medical students with Anatomy taught with a major clinical emphasis (3,4). This form of teaching can be extended to other surgical specialties and will teach anatomy in a functional setting.

References

Paragraph 11 of Tomorrow's Doctor (2009) requires the application of the knowledge of population health to medical practice. In the new case-based learning (CBL) course at Warwick Medical School (4-year post-graduate entry course) we have developed two innovative ways to integrate the teaching around population health into community based learning.

In the first year 8 to 10 students are allocated to a community placement and visit this base on seven days in the year where they interview patients and visit services. For the first day students are required to develop a health profile of the local population from routinely available data, which they present to their community tutors. This is accompanied by a walk-about of the area enabling comparison with their health profile. The dual aims are to: (1) enhance the learning around incidence and prevalence and sources of health information; (2) gain knowledge of the area and the likely impact on health. Developing teamwork is an additional outcome. Elements that the health profile is required to cover are:

- Demography e.g. age, sex, ethnicity
- Deprivation index
- Prevalence of disease (from QoF)
- Lifestyle
- What this all means for provision of care

We have some great examples of the students’ health profiles.

In the second year, students are assigned in pairs to a General Practice, and building on the health profile task, are required to carry out a mini health needs assessment (Stevens and Gillam 1998) on a specific topic relevant to the practice population. The aim is to enhance understanding about health needs assessment and their use in changing services to better meet local health needs; and in addressing effectiveness, cost-effectiveness, accessibility and equity of services. Students are currently undertaking this work, choosing varied topics according to the health needs of the GP practice (e.g. smoking cessation provision, prevention of osteoporosis, services for learning disability). Students are required to either deliver a presentation or a brief report, and examples will be available by the time of the conference.

We are currently evaluating this work against the proposed learning outcomes, and obtaining feedback from students, which will be presented.


Acknowledgment: Grateful thanks to the university and community tutors for their contribution to this teaching.
A case based near-peer teaching course improved medical students’ confidence in preparation for starting life as a doctor

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Background
Near peer teaching (NPT) is the process by which senior students provide teaching to junior peers. NPT is thought to be of benefit to education as teaching is delivered by teachers who have recently met required standards and know what is expected to succeed. Junior doctors have limited teaching experience and therefore develop skills quickly in a process of trial and error. This means NPT benefits both the teacher and the student.

Final year medical students often feel apprehensive about starting work as a doctor. Their focus in final year is preparing for final examinations rather than life on the ward. Common problems faced by newly qualified doctors are being unsure how to prioritise tasks, contact seniors and receive handover about sick patients. Near peer foundation doctors who have recently learnt how to deal with these issues first hand may offer insight to students about how best to prepare for life as a newly qualified doctor.

Methods
An 8-week lecture programme was designed with content covering core medical and surgical topics. Junior doctors with relevant ward experience from these areas were recruited and asked to produce 30-minute case based lectures that educated students about key skills and responsibilities that would be required as a junior doctor on their ward. Pre and Post-course feedback was collected using five point Likert scales.

Results
The average attendance to all 8 lectures was 12 students. Maximum attendance was 24 students and the lowest attendance was 6 students. Fourteen pre course and eleven post course feedback responses were collected. Before the course (43%) agreed that they felt ready to become a doctor and only 43% agreed they knew what was expected of a junior doctor. Following the course 63.6% of students agreed or strongly agreed that they felt more confident about becoming an FY1 doctor. 90.9% of students agreed or strongly agreed that they found the course useful and that they would recommend the course to other medical students.

Conclusion
The transition between medical student and junior doctor is very stressful and students can often feel unprepared. Near peer lecture teaching is a successful way to deliver information to medical students that will help them with this transition. Although this course only had a relatively small cohort, feedback suggests medical students felt more confident about their ability to start work as a junior doctor.

References
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Randomised controlled trial of gynaecology examination teaching models, hybrid vs clinical teaching associates

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Clinical Teaching Associates (CTA’s) and hybrid simulation teaching models have both been shown to improve gynaecology examination skills teaching, however, they have not previously been directly compared. This randomised controlled trial was designed to assess whether students taught by CTA’s or hybrid simulation show improved technical and communication skills for pelvic examination. Student anxiety levels a qualitative evaluation of the teaching experience were also assessed.

Methods
Students from the University of Bristol were invited to take part in the study. 18 students volunteered to take part. Students were randomised to receive CTA or hybrid teaching. The teaching session was standardised, so that the only difference was the model used, to reduce confounding.

The primary outcome measure was participants' technical and communication skills assessed using a standardised OSCE and validated assessment tool. Examiners underwent standardisation training, were blinded to the teaching method received and data used participant numbers to anonymise the data at analysis.

The secondary outcome measure was participants’ confidence and anxiety scores pre and post teaching. Participants’ qualitative evaluation of the teaching was also collected and reviewed.

Results
Mean OSCE scores in the hybrid and CTA groups were comparable. The combined OSCE scores for the hybrid and CTA groups were 101/132 (STD 13.3) and 95/132 (STD 14.2) respectively; with a breakdown in technical scores of 36/48 (STD 5.4) and 32/48 (STD 5.3), and communication scores of 55/72 (STD 9.6) and 56/72 (STD 8.8) respectively. There was no significant difference in OSCE scores between the two groups (T-test p=0.42); with a breakdown in technical scores (T-test p=0.08) and communications scores (T-test p=0.92).

In comparison there was a significant difference in student’s confidence scores (T-test p=0.008), with a mean improvement of 21% (5/24) in the hybrid group in comparison to 31% (7.5/24) in the CTA group.

All of the students who received CTA teaching strongly agreed that it was useful and that they would highly recommend it, whilst results from the hybrid group were more varied. Students in the CTA group valued examining a ‘real’ person and receiving direct feedback on their technique. Students in the hybrid group valued the doctor discussing their experiences. They valued the opportunity to practice communication skills but found the model unrealistic.

Conclusion
This is the first RCT comparing CTA and hybrid gynaecology examination teaching models. We will present the findings and discuss the potential implications for training, cost and future research.
Academic Supports for International Medical Students: A Case for Targeted Support.

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Background and Purpose
Most Universities in the UK now seek to attract greater number of international students than before because of increase in student mobility and for income generation. Furthermore, medical education curricula in the UK have undergone changes due to patients’ expectations and the General Medical Council (GMC) recommendations. All international students face challenges studying at Universities in the UK, but international medical students potentially also encounter additional specific academic difficulties related to the nature of the programme. Evidence suggests that international medical students underperform when compared with the home students, with odds of failure about 2.5 times higher, but little attention is being given to academic support for the specific challenges faced by international medical students. This study aims to explore the perceptions of international undergraduate medical students about targeted academic support that addresses their specific challenges.

Methodology
Focus group and questionnaire survey were used. A focus group of our international undergraduate medical student explored their academic challenges and support needs. This was followed by a questionnaire survey of a larger population of the students at all levels, based on the emerging themes from the focus group.

Results
Data on the students’ specific challenges and expectations for targeted academic support provisions will be presented.

Discussion and Conclusions
With increasing diversity of students and changes in medical education curriculum, far more guidance and support is now required by students. Most of the discussions on learning needs support provisions for international students have been very generic. The medical degree programme involves learning in both academic and clinical settings. However, unlike other programmes, this requires direct encounters and interactions with the local population as patients on which the students are assessed. It has been suggested that issues related to the contextualised nature of the medical education curriculum contribute to the underperformance of international medical students and to the higher dropout rate compared to home students. Addressing the question as to whether international undergraduate medical students require additional targeted academic support will help in adequate needs assessments and devising appropriate support schemes to ameliorate their performance and dropout rate.

References
Investigating the use of humour by medical students learning to teach

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Background:
As coordinators of a compulsory teaching skills course for medical undergraduates, anecdotal observation is that students often employ humour as a tool for engaging their peers. The course has evolved over the years to include teaching methods that the students themselves demonstrate when teaching their peers – for example the inclusion of competitions and prizes. This has led to interest regarding the role of humour and its potential use as an explicit tool in teaching medical students in the classroom setting.

There are potential hazards in attempting to mirror use of student humour. Attitudes towards learning methods differ among generations\(^1\), as well as individual variation in response to humour. Cynical attitudes and ethical erosion have been described longitudinally in medical training\(^2\) and this might also be expected to lead to differences in the interpretation of humour by students and faculty.

Nonetheless, humour has the potential to assist learning in a variety of ways; for example by reducing boredom, reducing anxiety, assisting memory, heightening interest and encouraging divergent thinking.

Study design
Ethics approval and participant consent was obtained. Pre-existing video material of groups of student teachers on the course was analysed by two researchers. This was carried out in the spirit of interpretivism – an approach that acknowledges subjectivity and the role of perspective and context\(^3\). The primary purpose of the video is for student use as a revision source and potential for self-reflection. This project is a retrospective analysis, therefore anticipated to be less subject to the Hawthorne effect, and with a key advantage of observing the participants from the student perspective (the camcorder is student-operated).

Results & Implications
Using an observational framework, we aim to document the use of humour by medical students in peer teaching and then use thematic analysis to develop a theoretical framework for understanding the use of humour by the generation of undergraduate students that we teach. By investigating this area of student participation, we aim to explore the potential for promoting the use of humour in the classroom setting.
Medical student views on the use of humour in lectures

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Background
Humour is a social construct whose impact on learning is presumed to be positive. The empirical evidence for this in the medical education literature, however, is limited. This project looks at the experiences, perceptions and attitudes of medical students to the use of humour in their undergraduate lectures.

Attitudes towards learning methods differ among generations¹, as well as individual variation in response to humour. Cynical attitudes and ethical erosion have been described longitudinally in medical training² and this might also be expected to lead to differences in the interpretation of humour by students and faculty.

Study design
Ethics approval and participant consent has been obtained. This research project is carried out in the spirit of interpretivism – an approach that acknowledges subjectivity and the role of perspective and context³.

A series of student focus groups will be conducted, with the aim of using an iterative approach to achieve theoretical and pragmatic saturation – this is likely to be in the order of 3 to 5 focus groups. Medical undergraduates from all years are invited to participate.

The focus groups will be run by a facilitator, where students will be asked to recall and give examples of humour used by their lecturers in their medical teaching. The study will seek to describe the student reactions to the types of humour used, and whether they feel that it impacted on their learning, memory retention and professional values.

Results & Implications
This qualitative data is to be analysed using thematic analysis by two researchers. In doing so, we aim to develop a theoretical framework to understand the student perspective on the use of humour in their undergraduate teaching and how it may impact on their learning and professional practice. This would be of use to faculty to evaluate the response of students to the use or absence of humour in considering student engagement and learning, as well as considering any implications for professionalism.
Are unfolding case studies a useful way integrating knowledge with clinical skills and attitudes at the start clinical training?

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Background
Skills like clinical reasoning, team work and communication, are difficult to teach and assess in the classroom. Furthermore, recall and application of information are best taught and rehearsed in environments similar to the workplace (Khan, 2011). Simulation teaching is therefore a useful learning tool for medical students alongside classroom tutorials and clinical placements. Typically simulation teaching is delivered to students towards the end of their clinical training in small groups using a SIM man. This is resource and labor intensive. Unfolding case studies are a form of simulation, where the case evolves in a manner that is unpredictable to the learner (Rees, 2011). We have designed a series of unfolding case studies for 3rd year medical students, with the aim of integrating classroom knowledge with the practicalities of assessing acutely unwell patients, and team-work. Perhaps unusually, in our scenarios one teacher plays the ‘patient’, thereby allowing practice and incorporation of history taking alongside the rest of the clinical assessment.

Methodology
The same 14-15 students are seen weekly for 6 sessions. During each session, students are randomly assigned into groups of 4-5 people which form their ‘team’. Each team has the opportunity to work through one case, and observe and feedback on 2 cases every week. Students must work through a relevant history and examination of the patient, request appropriate investigations and formulate a management plan. Qualitative data on whether the sessions are perceived to be helpful by the students, and if so why, will be collected via interview following the session. Objective evidence of improvement will be collected using pre- and post-session quizzes, and video analysis from the initial and final sessions using a standardized proforma.

Results
Results from the interview, pre- and post-session quizzes, and video analysis will be presented.

Discussion and Conclusions
Simulation teaching can help ‘bridge the gap’ between classroom learning and the clinical environment, as well as improving team-work and communication skills (Fisher and Poole, 1980), and has been shown to be beneficial at both undergraduate and graduate medical education levels (Okuda, 2009). If successful, our study will show that simulation teaching with relatively large groups and easily available resources is an effective way to develop learning. By introducing simulation teaching early in clinical training we hope that students can learn to integrate all of these skills as they accumulate knowledge, and feel increasingly confident in their abilities to assess unwell patients.

References
‘Doctor On Call’: A novel, interactive teaching series to prepare medical students for working as foundation year 1 doctors

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Background and Purpose
There has traditionally been little emphasis in undergraduate medical student teaching on the practical aspects of being a foundation year doctor (FY1). We conducted a survey of final year medical students which revealed that the main anxieties relating to FY1 were how to manage bleeps, how to assess and treat sick patients and coping alone. In light of this, we created a novel teaching series; ‘Doctor On Call’. This harnesses the well-recognised benefits of a case-based learning approach to discuss clinical scenarios likely be encountered as the FY1 on call. The purpose of the teaching series was to enable a new wave of doctors to feel confident and safe in managing common on call scenarios.

Methodology
Final year students on placement at a London teaching hospital completed preliminary forced-choice and open space questionnaires to determine their self-perceived confidence in managing clinical scenarios and comment on their concerns regarding FY1. Based on these perceived weaknesses and what was deemed necessary by experienced clinicians, a 4 week programme was designed. After each session, students completed a second questionnaire rating their confidence in managing the given scenario as an FY1 and providing feedback on the quality of the session. Suggestions for improvement were acted on to continually assess and refine the series.

Results
The ‘Doctor On Call’ series ran 8 times across one academic year. Prior to the teaching, only 14.4% of 42 student responses stated they felt confident in managing common clinical scenarios. Following completion of the series this increased to 98.3%. The core session on taking and prioritising bleeps showed an improvement of 4.8% to 94.8% in confidence pre and post session. The free text commentary reflected positively on this teaching initiative, with comments including ‘what I’ve needed all through medical school’ and ‘covered topics we don’t get exposed to’.

Discussion and Conclusions
We have completed a successful pilot for a novel teaching series whose results support improved student confidence in managing common scenarios on call. This reinforces the necessity for this type of teaching within the final year curriculum. We believe that in an otherwise exam-driven year, the ‘Doctor On Call’ series facilitates students’ application of knowledge to clinical scenarios whilst addressing the day-to-day practicalities of being a junior doctor. This is precisely what is needed to bridge the difficult transition from medical student to FY1. Further study and follow up of this cohort is planned.

References
1. Cave J, Goldacre M, Lambert T, Woolf K, Jones A et al. Newly qualified doctors’ views about whether their medical school has trained them well: questionnaire surveys. BMC Medical Education 2007; 7: 38
Can “ActionArt” Have an Effect on Third Year Medical Students Tolerance of Ambiguity?

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Background and Justification
Uncertainty is inevitable in Medicine, due to knowledge limitations, diagnostic constraints and variability in patient outcomes.\(^1\) Therefore, tolerance of ambiguity is an essential skill, with the implication of lacking this resulting in low patient and physician satisfaction, increased risk of burnout, negative attitudes and undesirable personality traits.\(^2,3,4,5,6\) Undergraduate medical education has been encouraged to introduce strategies to increase students’ tolerance to ambiguity.

The topic of humanities within Medicine is a growing body of published literature. It is notoriously difficult to measure the effect of the humanities and this project attempts to do so.

We are trialling “ActionArt”, an innovative form of humanities intervention that seeks to engage students in a completely different way than traditional forms of arts training which can be over-intellectualised and difficult to access.

Methodology
All third year medical students at Peninsula Medical School Truro campus were invited to participate in the study. Twelve students volunteered and were randomly assigned to either a morning or afternoon session on three consecutive weeks, each lasting 90 minutes. The sessions involved collaborating with an experienced artist to create individual and group pieces of art, encouraging creativity and reflection. Tolerance to Ambiguity in Medical Students and Doctors (TAMSAD)\(^7\) questionnaires were administered immediately before the first session, immediately after the final session and will be administered one year after completion of the course. Questionnaires were scored and translated into a 0-100 scale. Nine participants were interviewed after the final session to explore their experiences.

Results
Nine students had a positive increase in their TAMSAD score immediately after the final session. Three students experienced a decrease in score. The mean change in score was a positive increase of 3.8%.

Discussion and Conclusions
The results indicate an overall positive effect of the ActionArt course on students’ tolerance to ambiguity. Qualitative interview data demonstrated participants reflecting on the course being enjoyable, useful and beneficial to their undergraduate education.

We hypothesize that the use of medical humanities can encourage reflection, express creativity and promote holistic practice, subsequently improving tolerance of ambiguity. ActionArt is an innovative method of delivering an informal, fun and beginner-friendly form of humanities to the undergraduate curriculum.

1. References
Does the use of a ‘diabetes in pregnancy learning tool’ improve the educational experience for medical undergraduates in an endocrine antenatal clinic?

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Introduction
2-5% of pregnancies are complicated by diabetes mellitus¹, which has extensive morbidity for both mother and fetus if poorly controlled. As well as Obstetricians, specialty doctors such as GPs, Emergency Department Practitioners and Medics will manage these patients. The University of Bristol curriculum therefore states that Obstetric and Gynaecology (O&G) students should acquire knowledge of the diagnosis, risks and management of diabetes in pregnancy. How to teach this subject and which learning environment will best meet the student’s educational requirements is not known. Currently a didactic lecture is attended by all students at St. Michaels Hospital but students can attend a multiprofessional endocrine antenatal clinic. To structure the teaching received in this clinic a learning resource was created.

Aim
To investigate whether attendance at a diabetic antenatal clinic (with and without the use of a learning resource) improves a student’s learning experience and knowledge compared to didactic lectures alone.

Methods
41 students have been randomized to didactic lectures and attendance at the clinic with and without the learning resource. Prior to randomization the resource and a knowledge test underwent face and content validity. At the end of their O&G clinical attachment, all cohorts will complete a baseline questionnaire, single-best answer knowledge test and a student satisfaction survey.

Results
Descriptive statistics will be reported. A t-test will compare mean knowledge test scores and qualitative analysis of free-text comments will be completed.

Discussion
Although testing knowledge does not prove competence, enhancing leaner’s needs will improve the educational experience and is critical to success in higher education. The data we analyse will provide information that will inform educational planning for the following academic year for all five academies that teach O&G students from the University of Bristol.

References
Deprivation and Inequalities: Designing Posters for Learning

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Background and Purpose
All fourth year medical students in Dundee spend four weeks in an urban general practice. This is an ideal time to learn about inequalities and deprivation, topics which are not covered in depth in the first three years of the medical course, but present significant challenges for healthcare provision nationally and locally in Dundee and are also important themes in Tomorrow’s Doctors.

The students are required to complete an online module and then identify a patient they have seen in practice who is deprived in some way. From the patient history they create a poster describing how this individual is deprived, how deprivation affects their health and vice versa and put this individual in the context of their wider community by including community level data regarding the level of deprivation in the patient’s locality.

The students present and discuss their posters in a group session at the end of their placements. They are invited to select the poster that is, in their opinion, the best from their group.

Methodology
The value of designing a poster and presenting posters in a group setting will be assessed by feedback from students and informal feedback from staff involved in facilitating the end of block presentation and discussion sessions. The range of patients and types of deprivation will also be reviewed.

Results
Approximately 200 posters have been produced since introducing this learning activity. Although the evaluation is at an early stage the posters appear to be of high quality and the exercise seems to be popular with students. The end of block sessions seem to run well. More in depth analysis of the range of posters produced and feedback from students will be presented.

Discussion and Conclusions
This is still a work in progress but it is suggested that for many students the level of urban deprivation that they see is unexpected and for some a formative learning experience.

The structure of the exercise allows them to discuss their posters together and hence share learning experiences with one another.

In addition they learn valuable generic skills having to synthesise information and distil to down so it can be displayed in the form of a poster.

References
How to set up and evaluate a student-led peer-assisted learning society.

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Background
Interest in peer-teaching (also known as peer-assisted learning) has grown within the undergraduate medical curriculum in recent years, reflected by the amount of literature on the subject. The benefits of taking part in such a teaching experience include “providing role models” and “alleviating faculty teaching burden” within the medical school. Within Lancaster Medical School (LMS), there were popular – but sporadic – peer-lead teaching sessions from the Medical Society. Senior students had previously expressed the desire to teach their peers but were unable to do so due to the lack of a dedicated student body to facilitate such teaching.

Objectives
To determine whether students wanted a peer-assisted learning society (PALS), to create and set up the society, and to evaluate the first 12 months.

Method
The initial survey determining interest in a PALS was sent out to all medical students at LMS (n=248). Following the results, a societal structure and plan was created and presented to the Medical School, Lancaster University Students’ Union, (and medical students. A committee was then set up that included coordinators for each year group. Students wishing to teach attended a teacher training event run by staff and students, and were then allowed to apply to coordinators to teach. Their sessions were then peer-reviewed by an approved tutor. After giving the session, educators received feedback obtained via paper feedback forms that contained five questions and free text.

Results
Seventy-one (29%) students responded to the initial survey, and 90% of those who responded were interested having a PALS. The society ran 17 sessions over the first 12 months, for medical students in Years 1-3. The training event attracted 58 student participants. Average attendance at LUPALS sessions was 50% of students in each year group. Feedback following sessions was overwhelmingly positive.

Conclusion
Setting up a PALS in our medical school has been a successful and positive process and should act as encouragement for others who are thinking of doing the same. Students interested in developing a PALS should first determine the level of interest, consider how they will approve people to teachers (through training and reviewing), and develop ways in which they can generate feedback.
Improving undergraduate radiology teaching: current experiences and novel online approaches.

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Background and Aims
Junior doctors are involved in the planning, requesting and interpretation of many different investigations, especially in emergency situations. In spite of this, many medical schools offer limited to no formal radiology training 1,2 leaving junior doctors unprepared for some aspects of clinical practice 3,4.

Radiology is well positioned to play a central role in undergraduate education. It crosses over with nearly all medical specialties and it is essential that students and junior doctors have an appreciation of clinical imaging is used in their practice.

We sought to gauge current radiology teaching practice for medical students and junior doctors and develop a case-based, interactive, online radiology training programme for undergraduates

Methods
An online survey was distributed to all final-year students and Foundation Doctors (FYs) in South-East Scotland.
The survey assessed three areas: undergraduate training in radiology; current use of radiology and imaging in clinical practice; general confidence with common imaging modalities. The survey also asked whether the participants used online resources to help with imaging. There was a free text area to leave comments.

Using these responses, we developed student-directed online playlists, tutorials and teaching articles, matched to learning objectives defined by the University of Edinburgh and the Royal College of Radiologists 5,6. The playlists used a case-based approach to introduce students to basic radiology techniques and encouraged image interpretation, and the tutorials built on decision-making teaching based on these results. Post-session feedback was also collected for quantitative and qualitative assessment.

Results
120 surveys were returned. 43% of the FYs trained in Edinburgh as undergraduates.

17% claimed no dedicated undergraduate radiology training. All received teaching clinically on plain films. Other modalities were covered less: CT (71%), MR (31%), ultrasound (20%), nuclear medicine (8%). Confidence assessing chest films was high (76%) but dropped for other imaging: abdominal films (30%) and CT head (17%). Free-text responses requested more radiology teaching to improve clinical confidence and patient safety.

Teaching was designed for surgery and neurosciences placements. “Pre-learning” cases were sent to students with teaching articles prior to tutorials with a radiology consultant or clinical fellow. They were well received with positive ratings and comments highlighting the importance of radiology, and the online teaching style.

Conclusion
It is a requirement for junior doctors to have basic radiological knowledge, but this study suggests many do not get sufficient teaching as undergraduates.

A clinically focussed, interactive teaching approach with online resources proved popular with students.

References
What are Undergraduate Medical Students Views on Telesurgery for the Delivery of Medical Education?

K Hanks, R Singh-Ranger, K Jones
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Background and Purpose
Telesurgery is the process of using teleconferencing equipment to delivering live surgical teaching from one location to another, with two-way communication between the theatre and the audience. It's potential benefits are numerous(1) and technology enhanced learning (TEL) is becoming increasingly important in education. If adequately designed and implemented it can generate learning outcomes comparable, or even better than those obtained by traditional ‘classroom-based’ learning(2).

Swindon Academy piloted a telesurgery programme for 3rd year medical students, with the hope of introducing it into the final year programme. The aim of this project was to explore the students' views of telesurgery based on their experience.

Methodology
A single case study was carried out using voluntary questionnaires from students involved in the pilot. Questionnaires used both Likert Scales and open questions. Coding of textual data was performed using thematic analysis

Results
View on the effectiveness of telesurgery as a means of learning vary greatly (range 1-8, mean average 4.2). The pre live-link session was felt to be the most useful component (mean of 6.6.) Thematic analysis is ongoing. Initial themes include lack of information about the surgical procedure before the session, technical equipment issues and variability of supportive teaching.

Discussion and Conclusion
Several Studies have demonstrated that telesurgery can be used for educational purposes(3,4,5). Such tutorials are highly valued and deemed to be a useful tool in surgical education for postgraduates (6). Our small study does not support this in undergraduate students. However, results suggest that with modifications to the programme this may be achievable.

Evaluation of a Junior Doctor-led Prescribing Programme for Medical Students

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Background
Prescribing errors in hospital occur in almost 10% of prescriptions. The highest rates of error are seen in foundation year doctors. This has been ascribed both to deficits in pharmacological knowledge and to a lack of practical prescribing opportunities as medical students. We describe a programme of voluntary prescribing tutorials run by junior doctors (FY1-CT1) for year 5 medical students in South East Scotland and evaluate feedback on the students’ perception of the programme.

Methodology
Fifty seven voluntary tutorials devised by junior doctors and based around twenty prescribing scenarios commonly faced in foundation years were delivered in 2013 in hospitals across three health boards in South East Scotland. Students completed post-tutorial feedback questionnaires (n=171) using a Likert scale to explore previous prescribing experience, prescribing confidence and thoughts on the programme.

Results
Prior to attending tutorials 92% of students had written a prescription chart on the ward under supervision and 20% of them felt confident about prescribing for the designated scenarios. All attendees felt that the tutorials improved their knowledge and confidence on prescribing for the scenarios and 96% of them expressed a preference for tutorials to be run by junior doctors rather than more senior members of staff. In white-space boxes students expressed feelings that working through real-life scenarios as if they were in the situation would be beneficial and help prepare them for life as a doctor.

Discussion and Conclusions
A junior-doctor led prescribing programme was perceived by medical students to help them gain knowledge and confidence around prescribing. With new prescribing assessments being introduced in the medical undergraduate curriculum additional teaching is important and will provide opportunities to assess the impact of the content and delivery of our programme.

References:
Developing a junior doctor-led seminar programme in a district general hospital

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Background
Near-peer teaching (NPT) is widely used in medical schools and benefits both tutors and students. There is a move to increase teaching opportunities for junior doctors, and a drive for greater consultant-lead care with less time for consultants to teach. Research indicates several common problems with NPT programmes and highlights the importance of process evaluation and support from hospital faculty.

Methods
In a first pilot programme, nine presentation-based seminar sessions were organised for final year students following high demand, with support from the Director of Medical Education. These were delivered by tutors drawn from a voluntary bank of junior doctors. Each session was evaluated by anonymous participant feedback forms containing a mixture of Likert scale and free text questions, and students were asked to self-assess confidence in key syllabus areas at the start and end of the course.

Results
Challenges included liaison with hospital management, finding a convenient time, recruiting tutors for sessions, and acquiring feedback results after each session. We anticipate future challenges to include ensuring continuity after this intake of final year students and Foundation Year 1 doctors. This will be managed by close involvement of faculty staff and the possibility of extending the remit of existing ‘teaching fellow’ roles. Proposed improvements for future teaching programmes include a move away from self-assessment to formatively testing student knowledge at the start and end of the programme.

Discussion
Initial results support the use of NPT to deliver classroom-based sessions with a focus on case-based discussion. Students describe feeling more confident in key syllabus areas and tutors enjoy the opportunity to informally teach with feedback on their performance. This could be replicated in similar hospitals.
Are Clinical Teaching Fellow roles valuable for undergraduate medical education?

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Background and Purpose
Clinical Teaching Fellow (CTF) roles are an enjoyable and valuable experience from the CTF view and jobs are becoming competitive in UK hospitals. The General Medical Council states that all doctors have a duty to teach,¹ so is it necessary to have dedicated teaching doctors?

From personal experiences, CTF positions are both challenging and fulfilling, improving own knowledge, communication and teaching skills but also allowing us an insight into a career in medical education and giving an advantage in specialty training applications.

It has been suggested that students enjoy teaching from CTFs due to the good rapport² and continuity in teaching. In a new clinical environment, students often perceive CTFs as mentors and a guide to their development clinically and professionally.³⁴ With more hospitals introducing CTF roles, how do we know that this is a beneficial use of a split university and NHS budget?

Methodology
Questionnaires have been sent to students taught in Yeovil Hospital during the last academic year, before the introduction of CTFs and also to students who have been taught by the new CTFs this academic year. Student cohorts include third (and final) year medical students as these students are most closely involved with CTFs. The questionnaire was designed to assess student perception of teaching, organisation and orientation to clinical environment, with utilisation of a five-point Likert scale answering system and free text space for specific comments. On evaluation of questionnaires we will directly compare student perception of the above aspects before and during CTFs in Yeovil District Hospital.

Results
Results are pending following data collection but are expected to prove benefit of CTF against control.

Discussion and Conclusions
We expect to show improvement in all aspects of student perception of placement in Yeovil District Hospital with introduction of CTF positions, proving a global, positive impact of CTFs on undergraduate medical education. Results are likely transferrable throughout the majority of UK teaching hospitals. We hope this study will help to create more widespread CTF posts for junior doctors to increase recognition in those keen to engage in medical education whilst also allowing an insight into a fulfilling medical education career.

References
‘Hands on Haematology’: A contemporary approach to using microscopy and morphology in undergraduate medical student teaching

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Background
Microscopy and morphology remain a cornerstone of clinical haematology but teaching this highly specialised skill to medical students is a controversial area. In terms equipping the students with the knowledge and skills required to be foundation doctors, a solid grasp of the erythroid lineage is not advantageous. However, considering microscopy and morphology as a teaching tool to aid constructivist learning may provide far greater benefits. This project aims to examine whether using microscopy and morphology in haematology tutorials benefits learning in line with undergraduate curriculum.

Methods
‘Hands on Haematology’ is a one hour session introduced to the pathology course at Bristol Royal Infirmary for year 3 and 4 medical students. It includes discussion of three new patients presenting with haematological abnormalities, either in their clinical history or in laboratory results. These abnormalities correspond to acute myeloid leukaemia, a sickle cell crisis and immune thrombocytopenic purpura. Following review of a normal blood film for orientation, a case based discussion is carried out on each patient including differential diagnoses, pathophysiology and management. The group review the blood film looking for obvious abnormalities to support or refute what has been discussed. A multi-view microscope with four teaching heads is operated by the haematology registrar or consultant running the session so fields of interest can be located for the students.

Results
To date, nine one-hour sessions have been delivered by 4 clinicians to 45 medical students. Feedback from students has been unanimously positive regarding benefit to learning. Students find the session interesting and fun, they feel that have a greater understanding of the role of a haematology doctor but most importantly they feel that learning is improved as there is an added visual and kinaesthetic dimension. 24 students were asked to judge benefit to learning of multiple modalities of teaching on the course. This session scored ahead of lectures, outpatient clinics and private study. We are now in the process of collecting objective evidence of learning.

Discussion
‘Hands on Haematology’ uses cell morphology and microscopy to provide an interactive session which promotes active and constructivist learning and provides a visual context to haematological conditions. For undergraduates, the pathology specialties do not lend themselves so freely to ‘hands-on’ experiences as much as their medical and surgical counterparts therefore it is time we think more creatively about providing innovative learning experiences in this field.
A Student centred approach to haematology and pathology multi-disciplinary team teaching.

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Background and Purpose
The increasing specialisation of medical practitioners means that there is increasing difficulty in educating medical students with a holistic approach to patients.¹ There is a consensus in the literature on the need for an interdisciplinary component to medical education.¹,² One solution is for medical students to attend Multi-disciplinary team meetings (MDT’s). Here they can see how specialities interact to make important decisions about patient care. However, for Pathology medical students at Great Western Hospital, attendance at business MDT’s is unpopular. We have previously described an improvement in feedback from haematology patients with a student centred MDT³. We looked at whether this style of teaching was applicable to pathology students at Great Western.

Methodology
Students clerked the respective patients for their haematology and pathology MDTs. They then ‘booked’ their patient to be discussed in the MDT by contacting a tutor with the name and details of the patient. At the MDT they presented the history and examination and then facilitated by a haematologist/pathologist and radiologist the cases were discussed. The emphasis was placed on the radiological and histological finding relating to these patients.

Anonymous feedback was collected at the end of each session in the form of a questionnaire

Results
We are adding to our previous data set in relation to the haematology MDTs and the student’s feedback from these. Data collection is also occurring in parallel to look at the student’s experience of the pathology MDTs and whether this method is also beneficial in this setting. Current interim analysis shows an improvement in student experience with a student led MDT compared to a traditional MDT style (3.53 vs 2.95 p=0.025).

Discussion and conclusions
Given the interactivity of the session and the emphasis on a holistic approach to managing a patient we would expect that this is a beneficial way of teaching pathology in addition to further demonstrating its usefulness in haematology teaching.

References
Factors contributing towards poor junior doctor prescribing and how pharmacists can help: educational audit based intervention to improve safe prescribing.

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Introduction
Publication of the EQUIP study [1] highlighted 8.4% prescribing error rate for junior doctors, thus a need for prescribing education as undergraduates identified. Variation in junior doctor prescribing skill stems from factors such as prescribing under pressure & in isolation[1,2]. In practice pharmacists undertake a supportive role to minimise these errors, and often an underused resource [3]. With increasing demands on our NHS to deliver more with less, is it advantageous to expose medical students to pharmacists role, support provided & promote teamwork. Norfolk & Norwich University Hospital Pharmacy department collaborated with University of East Anglia Medical School to develop an educational intervention. Here, medical students would conduct the annual prescribing audit instead of pharmacists: observing current Dr prescribing through the eyes of pharmacy to identify common pitfalls/avoidable errors.

Study objectives

Methodology
136 5th year medical students, randomly and equally distributed between 30 pharmacists, across all medical & surgical wards completing 10 audits/drug charts, per ward over one week. Data collected via on line survey before and after the audit and via audience response devices during post intervention educational lecture. All surveys comprised of: (7) Likert Scale (2) selecting top three answers from eight choices (1) open ended questions. This is the second year of this intervention, thus V-1 was piloted in the first study[2] predominantly comprising of open ended questions to gain qualitative insight to create V-2. Survey completion was voluntary (N:100 before audit/ N:34 after audit / N:100 after lecture) Results analysed by Pharmacists and medics

Results.

<table>
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<tr>
<th>Objective</th>
<th>Finding</th>
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<tbody>
<tr>
<td>1. Awareness of prescribing standards</td>
<td>33% increase awareness of the prescribing standards and what they are</td>
</tr>
<tr>
<td>2. Factors contributing towards poor prescribing</td>
<td>Top three factors that contribute towards poor prescribing are: [1] Time pressure 27.5% [2] Inexperience 19% [3] Distractions 15%</td>
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<td>3. Awareness of pharmacists role</td>
<td>18.5% increase in the awareness of pharmacist role after the audit &amp; lecture.</td>
</tr>
<tr>
<td>4. Importance of pharmacists role in prescribing</td>
<td>39% increase in importance of the role of a pharmacist</td>
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Discussion
This education intervention was set up to enhance safe prescribing skills in final year medical students. Our intervention found ↑33% awareness of prescribing standards. Student’s overall refection of top three factors contributing towards poor prescribing revealed: Time pressure (27.5%) Inexperience (19%) & Distractions (15%). Post-audit we note ‘In-experience’ ↓9%, ‘Carelessness’ ↑8% and ‘lack of knowledge’↓3%. We also asked students to identify three factors to improve prescribing, we found: Seeking advice from experienced staff (17%) focusing on task at hand (16%) and time management (15%). Observing real time prescribing has shown to ↑ student awareness of actual factors contributing towards poor prescribing and how to manage these challenges. We found 18.5%↑ awareness of pharmacists’ role and 39%↑in the importance of a pharmacists’ role in prescribing. Although 100% pharmacists & 93% medical-students (7% drop out/sick) participation, poor survey completion after the audit may only reveal views of keen students. However, survey completion increased during lecture via audience response, so there is potential to collect data in real time than retrospectively. Overall 76% students’ perspective on safe prescribing changed post intervention and 79% found it useful.

Conclusion
This education intervention found increase awareness of actual factors contributing towards prescribing errors and methods in which to prevent them. Greater awareness of the role and support pharmacist provides illustrated, and further validated by students willing to seek their help to prevent errors.

References


Dyslexia in Medical Education: An Autobiographical Case Study

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Background and Relevance
Dyslexia is a common condition within the United Kingdom. It effects approximately 10% of the population as a whole and an estimated 1.7% of medical students (1). These prevalence data are however outdated and need modernising.

This paper forms the first part of a programme of research comprising the following:
5. Dyslexia in medical students: a review of the literature.
8. The experiences of medical students with dyslexia. (Phenomenological study).

Methodology
JA interviewed SS in an unstructured manner. The generated transcript was then used to compliment SS’s introspection in the development of the discussion.

Results
6 themes were identified within this interview. These are presented.

Discussion and Conclusions
SS discusses his experience as a UK medical student with dyslexia. This account spans from the application process through to the clinical years of study – including the study of an intercalated MSc. We have highlighted the emotional burden, academic weaknesses and positive aspects of having dyslexia in this unique and challenging environment. We have also attempted to shed light on the well-used term coping strategies (2, 3) by highlighting several of SS’s own strategies in detail. It is our hope that this article will pave the way to more qualitative research within this area, making use of multiple participants.

References
Medicine as a Fourth Language: The Case of a Dyslexic, International Medical Student

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Background and Relevance
Dyslexia is a common condition within the United Kingdom. It effects approximately 10% of the population as a whole and an estimated 1.7% of medical students (1). These prevalence data are however outdated and need modernising.

This paper forms the first part of a programme of research comprising the following:
12. The experiences of medical students with dyslexia. (Phenomenological study).

In this paper we address the issue of Medicine as a fourth language following Farsi, Russian and English from the perspective of a student with dyslexia.

Methodology
SS interviewed FJ in an unstructured manner. The generated transcript was then used to facilitate the development of the discussion under the guidance of JA. This piece bridges phenomenological and autoethnographic methodologies.

Results
7 themes were identified within this interview – including a coping strategy.

Discussion and Conclusions
This piece narrates and analyses FJ's experiences as a dyslexic medical student studying a subject in a language that is not her own – a fourth language. It details the struggles and strengths associated with these experiences. The high levels of support from her medical school and peers is discussed alongside its value to her. FJ feels that she is able to make the distinction between her dyslexia and unfamiliarity with the English language. For this reason, she is able to discuss their interactivity and how they have affected her. We hope this will provide Medical Educators with insight into students in similar situations.

References
Dyslexia in Medical Students: A Review of the Literature

SCK Shaw, JL Anderson
SCK Shaw, Postgraduate Student, Division of Medical Education, Brighton & Sussex Medical School, Brighton, United Kingdom.

Background and Relevance
Dyslexia is a common condition within the United Kingdom. It effects approximately 10% of the population as a whole and an estimated 1.7% of medical students (1). These prevalence data are however outdated and need modernising.

This paper forms the first part of a programme of research comprising the following:
1. Dyslexia in medical students: a review of the literature.
2. Dyslexia in medical education: an autobiographical case study.
4. The experiences of medical students with dyslexia. (Phenomenological study).

Methodology
PubMed and The Cochrane Library were searched. No time, language or location restrictions were set. All papers selected had to relate to medical students and their medical studies.

Results
5 papers were selected for this review.

Discussion and Conclusions
Most studies of medical students are quantitative, comparing examination performance in those with and without dyslexia (2-6). Medical students with dyslexia are slower to adapt to medical school and therefore underperform early in the course (3). However, with the appropriate support, they appear to perform on a comparable level to their non-dyslexic peers (2-4). However there are contradictory findings. There has been no in-depth qualitative research to document medical students’ experiences.

We draw some interesting comparisons from research in other healthcare students. We hope to begin to fill the void in research involving medical students. This review highlights that more research is needed in the medical student population; especially in-depth research of a qualitative nature.

References
A Near-Peer Flipped Classroom in Critical Appraisal Education

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Background and Setting
As doctors of the future, Medical Students (MS) are expected to develop a high degree of self-reliance in their learning (1). This includes filtering and assimilating large quantities of information (1). MS therefore need to be able to critically appraise research papers.

As an intercalating medical student, SS was acutely aware that almost no attention is given to training in this skill-set – having received none until beginning his intercalated Master of Science Degree. For this reason, we pondered how this training might be achieved whilst maintaining an active learning approach and promoting further self-directed learning.

Methodology
A near-peer teaching session was run with third year MS (N=10). An online feedback survey was sent to participants immediately after the session. They were then followed-up at 2-months – due to an assignment requiring this skill set within that time period.

Results
60% responded to each survey. Of these 60% the immediate results showed that 100% thought the session was well taught. 100% felt more confident about critical appraisal. 100% felt comfortable asking questions and inputting their own experiences. Nobody responded negatively to any of these points – neutral responses were allowed. On 2-month follow-up, the results showed that 100% still thought the session was well taught and 100% would recommend the session to other MS. A free comments box was available on both feedback surveys.

Discussion and Conclusions
The participants recalled no prior training in critical appraisal. They were emailed a primary research paper (a Randomised Controlled Trial) in advance of the session. They were asked to familiarise themselves with, but not learn the paper. The session was run as an interactive, group session. Participants were asked questions and given problem-solving tasks to complete. The session was designed to highlight the combined knowledge of the participants.

“I really liked the discussion style of the teaching session, it didn’t feel like we had a lecture, yet I learnt so much”

This short session helped the MS to gain a basic understanding of critical appraisal. It allowed them to show themselves how much they knew, in a friendly near-peer taught environment.

References
Integrating global health learning into the undergraduate medical curriculum: lessons from an SSC

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Background and purpose
Globalisation has profound effects on health and healthcare worldwide, with implications for the next generation of the healthcare workforce. At the University of Aberdeen an initiative was started in 2013, and continued in 2014, to begin to integrate learning on global health into the MBChB curriculum. The chosen entry point was a six-week Student Selected Component (SSC) offered within the third year Medical Humanities block. Developed through a pragmatic approach, utilising local NHS and academic expertise, each week is structured around a key global health issue. A variety of teaching styles are employed, emphasising case discussions and peer-learning, combined with original assessment methods, including preparation of a journal commentary and PechaKucha presentations. In line with the humanities setting, students are encouraged to develop non-medical and interdisciplinary perspectives to healthcare issues. This paper will present findings from a small project to identify early lessons from this approach to strengthening learning on global health.

Methodology
Evaluation of the impact on students’ skills and interest in global health was assessed through an online structured questionnaire administered to both cohorts of students (n=33). The survey allowed simple quantitative analysis and a qualitative component with open questions. In addition, secondary analysis was undertaken using the data from the University’s standard evaluation form (SCEF). Semi-structured interviews were conducted with course faculty to explore their perspectives on the module’s appropriateness and effectiveness.

Results
We explore students’ perceptions of the impact of a global health and humanities course on their understanding, and on generic skills such as writing, presentation and reflection. We examine the value of teaching global health through a SSC and approaching the issue from a humanities perspective.

Discussion and Conclusions
An education contextualized by global health can prepare doctors for work in a globalised world, and can also assist with the development of generic skills and competencies1. Integration of global health into UK medical curricula has been proposed by the General Medical Council2. While mainstreaming of global health is the goal, this is a complex process and questions are being raised about the failure of medical education to prepare doctors to meet the challenges of globalisation3. There is an acknowledged need to adopt a variety of teaching opportunities and modalities to address this gap4, 5, along with a need for greater sharing of experiences6. This small project shares one experience of a novel approach of integrating global health learning through medical humanities.

References
Depression among UK undergraduate medical students: A multicentre, cross-sectional comparison of first and final year students.

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Background
Debate surrounds the prevalence and trajectory of depression among medical students. A recent systematic review reported mean prevalence of depression among medical students of 25.6% compared to 36% among non-medical students.1 Another review reported prevalence rates ranging from 6.0% to 66.5% among medical students outside North America.2 None of the studies cited focused on UK medical students. The trajectory of depression during the undergraduate course is also unclear.3,4

Our previous study conducted in only one UK medical school found prevalence rates ranging between 2.7% and 10.6%, with no increase over time.5 We extended our study, with 15 UK medical schools participating in an online survey examining a] whether final year students were more depressed than their first year counterparts and b] whether men and women differed in this respect.

Methods
We use HADS-D to measure depression, defined as a scale score of >/=8, t tests to compare mean scores and chi square to compare prevalence rates.6

Results
1132 first year and 780 final year students participated. Response rates varied from 6% to 77% both between schools and between years. Overall response rates were 30.4% for first year and 21.3% for final year students.

Mean HADS-D scores and prevalence rates of depression were for first year students 3.43 (2.741) and 8.4% and for final year students 3.78 (3.364) and 14.4%. No gender differences emerged in either year in respect of either mean scores or prevalence rates.

However, in 3 schools final year students (n=272) participated 2 months or less prior to finals. Their mean HADS-D score was 4.73 (3.700) and their prevalence rate was 22.1%, both significantly higher than those recorded by students who had either taken finals or whose finals were distant.

Final year students for whom finals were not imminent recorded slightly lower mean HADS-D score and prevalence rate than their first year counterparts: 3.26 (3.055) compared to: 3.50 (2.887) and 10.2% compared to 9.5%.

Conclusions
Confirming the findings of our previous study, prevalence of depression among UK medical students was lower than that reported in other studies. Unlike other studies no gender differences were found. Final year students not facing imminent finals did not record higher levels or greater prevalence of depression compared to first year students. Context may significantly affect depression and should be reported in studies examining depression among medical students. (389)

Leave it out? Exploring attitudes toward peer assisted learning and its inclusion in the formal curriculum at a UK medical school

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Background
Peer assisted learning (PAL) is well documented to have benefits for learners, teachers and medical faculty\(^1\)\(^2\). Peer tutors are said to be more socially and cognitively congruent with learners, more approachable and better at explaining difficult concepts\(^3\)\(^4\). Students who are involved as tutors have developed valuable skills that may influence their future practice\(^5\). As various PAL success stories have emerged internationally, medical schools have begun to introduce formal PAL in their curricula\(^6\)\(^7\). This study set out to explore staff and student attitudes towards PAL at one UK medical school.

Methods
Students in years 2 and 3 of the MBChB and selected members of faculty were invited to attend a short interview to discuss their experiences of PAL. Interview responses were audio-recorded, transcribed and thematically analysed. The study was undertaken as part of the first author’s intercalated degree in medical education and within an interpretivist research paradigm\(^8\). The authors’ own PAL experiences were explored and informed interpretation of the interview data.

Results
Seven students and six members of faculty were interviewed in Spring 2014.

Students tended to focus on their informal PAL experiences, whereas staff spoke more about PAL experiences organized as part of the formal MBChB curriculum. Students were grateful when older students gave them tips on how to pass exams and get through placement; in situations outside of medical school teaching. Students on the whole trusted what a peer tutor taught them – however they preferred being taught factual information (e.g. physiology) from an expert in the first instance. They perceived that the involvement of faculty in PAL prevented them from being fully relaxed and engaged, and therefore they gained less from such sessions. Peer tutors said teaching was enjoyable and that they hoped they could pass on their experiences to benefit younger students.

Conclusion and Future Directions
There is a danger that the formal introduction of PAL in curricula detracts from what makes it so effective – that it is informal and often opportunistic. Faculty must be careful not to reduce PAL to something students must do in order to satisfy course directors. Students should be encouraged to conceive and deliver PAL sessions independent of faculty, albeit with guidance when needed. Further in-depth studies of student experiences and attitudes are warranted, alongside research into whether coaching in teaching and learning theory is beneficial to peer tutors and learners.

References:
A Novel Teaching Programme refined with Quality Improvement methodology: “The FY1 Guide to FY1”

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MT Foster, Salford Royal NHS Foundation Trust, Salford, UK

Background:
Culturally the final year of Manchester Medical School is in two stages: Preparation for final exams, and preparation for starting Foundation Year One (FY1). There is evidence that in retrospect, FY1s felt they were unprepared, and anecdotally it is felt that doctors do not feel they are confident until approximately two months or longer into this role. The authors hypothesised that earlier integrated training about the FY1 roles may aid movement of this confidence transition to late medical school.

Aim:
To devise and continually improve a sustainable teaching programme to
1. Improve confidence and knowledge of FY1 in final year students before leaving medical school
2. Begin a cultural change whereby final year students leave university more equipped for the FY1 job when rather than after they begin.
3. Develop FY1 doctors as medical educators

Methods:
An initial pilot cycle comprised six one-and-a-half hour sessions. Positive feedback enabled a larger programme of eight one-and-a-half hour sessions. Each was an interactive, case scenario driven session devised and led by two FY1 doctors, with consultant approved content. Topics were chosen based on survey of 16 FY1s, to include commonly faced challenging scenarios: sepsis, venous thromboembolism prophylaxis and anticoagulation, clerking a patient, communication with other specialities, prescribing of analgesia & fluids, interpretation of basic radiographs and blood tests.

Formal feedback was collected comprising three session specific questions with pre- and post-confidence rankings, as was the question “should junior doctors be more involved with undergraduate education?” Free-text comments were encouraged. Each week was seen as a PDSA cycle, with feedback from each session was used to try and improve the next.

Results:
Analysis of the “pre” and “post” confidence questions found significantly improved perceived confidence for all areas (p<0.01) (except in two sessions where numbers were too small to allow Wilcoxon Signed Rank analysis).

From 143 feedback forms, all participants agreed, and 91% strongly agreed, that junior doctors should be more involved with undergraduate education.

Conclusion:
The FY1 Guide to FY1 was perceived as beneficial to students. It is imperative that such a programme remains delivered by FY1 doctors, as they are the most aware of their daily work of an FY1. We have therefore recommended a continuous self-propagating cycle of the guide to be handed down each successive year. It is hoped that participants will have improved confidence with FY1 skills and this will ultimately improve patient care.
Simulated on-call: preparing students for practice

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Background
Many final year students feel underprepared for their first year of work and increased use of simulation in medical schools has helped bridge the transition from student to doctor. In 2014 a simulated on-call was designed to help prepare students for out of hours work. Although it improved students' self-perceived confidence, peer-feedback at the ASME annual scientific meeting 2014 highlighted the need for a smaller scale design and an assessment of its educational impact. A new on-call simulation has been designed to address these. The aims were 1) to design a smaller simulation suited to use on a wider scale, 2) to assess its impact on students’ abilities to deal with common on-call scenarios and 3) to seek student views on the new simulation.

Methods
During their academy welcome lecture final year students were asked to anonymously write on paper their biggest fear about being a doctor. Foundation year 1 (F1) doctors in the same hospital were invited to attend a focus group to discuss the most challenging aspects of out of hours work. A new simulated on-call was designed to encompass the recurring themes from both groups. A trial of concept was undertaken with a small number of students in December 2014. Issues from this have been addressed and the finalised simulation will take place in March 2015.

Results
Analysis of student fears and F1 focus groups will be presented and compared with the 2014 results. The new simulated on-call design will be presented together with its educational impact.

Discussion and Conclusions
This simulated on-call has been designed to address the specific fears of final year medical students and address challenges highlighted by F1s that students may not be prepared for. Strengths and limitations of the simulation will be presented and related to an alternative model which has already been proposed in literature.

References
1 Carling J. Are graduate doctors adequately prepared to manage acutely unwell patients? Clinical Teacher. 2010;7:102-5.
In situ simulation: medical students and junior doctors working together to improve their management of the acutely unwell patient

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Background
Increased use of undergraduate simulation has helped bridge the gap from student to doctor\(^1\) and improved junior doctors’ confidence in managing acutely unwell patients.\(^2\) Growing evidence suggests that in-situ simulation positively impacts on patient care; deteriorating patients are recognised and escalated to intensive care quicker following regular sessions.\(^3\) A new in-situ simulation series has been designed aiming 1) to enable final year medical students and foundation doctors to work together to manage acutely unwell patients real-time on a medical ward, 2) for participants to recognise a patient’s deterioration and the need for referral to intensive care, and 3) for students, doctors and other healthcare professionals to learn from each other’s experience.

Methods
During their academy welcome lecture final year medical students were asked to anonymously write down their biggest fear about being a doctor. A series of simulation scenarios have been designed to encompass recurring themes. All scenarios are centred around an acutely unwell patient who deteriorates despite appropriate treatment and requires referral to intensive care. The simulation will take place in March 2015 with different scenarios taking place on different days. Each scenario will be followed by a debrief. After completing the scenarios, participants will be invited to attend a peer-teaching session, enabling them to learn from the scenarios they didn’t participate in. The educational impact of the series will be assessed against a control group.

Results
Analysis of student fears will be presented together with scenario design, practicalities of implementing the series and its educational impact.

Discussion and Conclusions
In-situ simulation is expanding in recognition of its potential to improve patient care. The simulation series presented here addresses areas from the foundation and undergraduate curricula. It is unique in uniting undergraduate and postgraduate learning and encouraging deeper learning through peer-teaching. Strengths and limitations of the series will be presented.

References
\(^2\)Carling J. Are graduate doctors adequately prepared to manage acutely unwell patients? Clinical Teacher. 2010;7:102-5.
Background
Exposure to dying and death is assumed to trigger death anxiety (DA)\(^{(1)}\) which may affect attitudes and behaviours of those caring for dying patients.\(^{(2)}\) Knowledge about medical students' DA is limited. This UK multicentre cross-sectional online study examined:

1. Levels of medical students DA,
2. Whether final year had lower level of DA than first year students,
3. Whether men and women differed in this respect,
4. Whether DA is related to personal confidence in dealing with others in distress.

Methodology
Fifteen UK medical schools (1911 medical students) participated. We classified 4 schools as High Response Rate Group (HRRG; response rates first and final year students 54.9% and 46.5%) and 11 schools as Lower Response Rate Group (LRRG; response rates first and final year 23.5% and 15%).

DA was measured with the revised Collett Lester Fear of Death Scale (CLFODS-R)\(^{(3)}\) which has 4 subscales. Personal confidence in dealing with the distress of others was assessed with the Personal Distress Scale of the Interpersonal Reactivity Index (IRI-PD)\(^{(4)}\). Two-way ANOVAs and correlation analyses were undertaken.

Results
CLFODS-R total scores (max=140) ranged between 99.4 and 88.1. Fear of Death of Others and Dying of Self scores were higher than those for fear of Dying of Others and Death of Self. HRRG first year students' mean scores for all subscales were higher than those of final year students. No gender differences in trajectory were found. With the exception of the fear of Death-of-Self subscale, women recorded significantly higher mean scores. Effect size \(\eta^2\) ranged from .01-.03. LRRG results were similar. While differences between first and final year students were less pronounced, gender differences were more pronounced. Weak but significant correlations were found between CLFODS-R total score and IRI-PD (p=.01).

Discussion and Conclusions
DA was moderate among medical students. Final year students' DA was lower than that of first years. In line with previous studies\(^{(5)}\) women recorded higher levels of DA than men. Negative associations between DA and confidence in dealing with distressing situations suggest DA should be addressed during medical education.

Personal reflection on a year as a clinical teaching fellow – Has it made us better doctors?

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Introduction
Teaching is the passing of knowledge, creating a new generation of professionals. Hippocrates’ oath notes its importance (5th century BC): ‘I will teach them my art without reward or agreement’. However, we found that rewards were numerous during our year as clinical teaching fellows (CTF). We hence wondered what its effects on our professional lives had been. Has a year as a clinical teaching fellow changed us as doctors? Has it taught us new skills or changed the way we approach patients and colleagues?

Methods
Through discussion we (previous CTFs at Gloucestershire Academy) created a list of reflective questions. We then each wrote a reflection, noting common themes and significant differences. Other previous CTFs will be asked to write a similar anonymous reflective piece based on these questions.

Results
We gained exposure to knowledge and skills within specialties outside our chosen careers that we might not have had the chance to acquire within a normal career path. We however feel that we benefited most from a human factors perspective. Here are a few extracts from our reflections:

‘I feel that spending time with students, learning how they question routines within hospitals, has given me a fresh pair of eyes. At times, I now stop, for no reason at all, and simply watch. It is amazing how many little things you pick up on that could be done differently to change them for the better.’

‘Medical school teaches you how to be a good doctor but the knowledge and skills to succeed within a large corporate environment such as the NHS are often left undeveloped. My year as a fellow developed my understanding in this area through management and leadership training and participating in course development and management. I use these skills on a daily basis and I feel will be invaluable as I progress in my career.’

‘Education, especially as a CTF where you work closely with students, requires a huge amount of interpersonal skills to provide adequate pastoral care. The past year has allowed me to grasp patients as individuals faster, allowing for more personalised care.’

Wider results are awaited.

Conclusion
A CTF year allowed us to become better doctors by gaining skills of different nature, most importantly interpersonal. We thoroughly recommend such an out of program experience to anyone working within the field of healthcare.

References
The Uneven Landscape of the Medical Student SSC: Do we need a Level Horizon?

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Introduction
Student selected components (SSCs) provide an opportunity for medical undergraduates to direct a segment of their curriculum. The GMC mandates SSCs as an integral part of the curriculum, designed to enhance student development.¹ This work outlines the current SSC focus of University of Bristol students by specialty. It intends to highlight medical fields currently receiving less interest.

Methods
492 SSC titles completed during the 2013/2014 Academic Year (n=264 Year 4 projects, n=228 Year 3 projects) were coded to the specialty of best fit.

Results
Obstetrics & Gynaecology (7.7%), Psychiatry (7.5%), Paediatrics (7.1%), Trauma & Orthopaedics (6.5%) and Primary Care (3.5%) were the top 5 specialty choices. Specialties that were under-represented in the context of proportional patient workload included Emergency Medicine (1.0%), Gastroenterology (0.6%), Older Person Care (0.6%), Renal Medicine (0.4%) and Palliative Care (0.4%). Psychiatry, Sexual Health and Surgery were successful in increasing interest through the provision of established taught SSC programs.

Conclusions
The uneven SSC distribution does not correlate to specialty size. Those specialties receiving less student focus currently could consider the implementation of formal, structured SSC programs to improve student engagement. Establishing early student interest may be a mechanism to enhance future trainee recruitment to these specialties.

Analysis of student-tutors preparing third year medical students for their Objective Structured Clinical Examinations

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Introduction
The perceived benefits of peer-led education on tutors has been recently reviewed by several groups \(^{(1,2)}\). This study is based on a structured mock OSCE style program (“PhOSCE”) run by fourth year medical students teaching core clinical skills to third year students at Leicester Medical School. We aimed to specifically measure outcomes for student-tutors who participated in PhOSCE and evaluate these in relation to recent reports.

Methods
Using a five-point Likert scale, tutors (n=28) teaching either a clinical examination, or a clinical communication skill (history-taking or explanation of a condition to a patient), were asked to assess confidence in their chosen skill pre- and post-intervention. Other quantitative outcomes measured included willingness to tutor at subsequent PhOSCE sessions, whilst qualitative outcomes included reasons for gained benefit and improvements to the session from a tutor’s perspective.

Results
Responses to pre- and post-intervention questionnaires were compared using Mann-Whitney U tests. Overall, tutor confidence in their chosen skill increased significantly \((p=0.036)\) after teaching. This perceived benefit was reflected in written comments, whereby repetition of teaching and observing the variety of student approaches were deemed the most useful in the tutoring process. Suggested improvements included ensuring students were better prepared for the sessions, and to provide more examination-specific equipment such as tendon hammers and tuning forks. A total of 96% of tutors indicated a willingness to re-teach at PhOSCE the following year.

Conclusion
Our results show that after teaching in PhOSCE, tutors reported an improved confidence in their examination and communication skills, validating previous findings. Further studies are underway to assess whether peer-led teaching leads to an improvement in tutors’ performance on the wards or in clinical exams.

References
Making Psychiatry Fun: A Multidisciplinary Approach In Teaching Medical Students

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Background and Purpose
As a medical specialty, psychiatry remains one of the least popular career choices for doctors in training.¹ Much has been done to reverse this trend, to improve the image of psychiatry and make it a more competitive field for applications.² Part of this work has been aimed at medical students as evidence suggests a positive experience as a student can increase recruitment to the specialty.

Imperial College London's School of Medicine has a novel approach that introduces four key professionals in mental health to students in a 'speed dating' format framed around an important and commonly applied skill; multi-professional assessment for the Mental Health Act. Students meet a psychiatrist, AMHP (Approved Mental Health Professional), GP (General Practitioner) and a police officer in turn. In small groups the students are guided through a clinical vignette, with the opportunity for in-depth questioning of the case and each professional. The aim is to instil a meaningful understanding of a psychiatric patient and how closely integrated disciplines are in this specialty. We sought to evaluate the effectiveness of this approach and whether it might be applied to study units for other specialty areas.

Methodology
Students across five cohorts in 2014 and 2015 were asked to complete an evaluation questionnaire. This consisted of a free text question asking the student to list two roles for each professional in the management of psychiatric patients in the community before the session began. They were asked to do the same after the session and to answer the following questions on a five-point scale ranging from 'strongly disagree' to 'strongly agree'. There was a free text box for general feedback at the end of the questionnaire.

1. The 'speed dating' structure of this workshop improved my awareness of different professionals involved in the assessment of mental illness and their role.
2. My understanding of how professionals liaise with each other and the referral pathways in primary and secondary care has improved as a result of this workshop.
3. I would value more workshops with multiple professionals like this in other parts of the medical course.

Results
There were 175 respondents in the cohort in total from 215 students, a response rate of 81%. 95% of respondents (n=167) answered 'Agree' or 'Strongly Agree' to Question 1. Over 90% of respondents (n=159) agreed or strongly agreed with Question 2. 77% of those surveyed (n=134) agreed or strongly agreed with Question 3. The free text responses indicated an improved understanding of the roles of all the professionals, especially the police officer and AMHP. The vast majority of the feedback comments were positive highlighting the interactive nature of the session and the chance to meet the police officer and AMHP as particularly useful to their learning.

Discussion and Conclusions
Our results suggest that a multiprofessional approach to teaching psychiatry is effective in engaging students and improving their understanding of professional roles, especially those with which they are less familiar. There may be potential to apply this method of learning to other specialty modules within the medical undergraduate course.

References
A Student Survey Assessing The Comparative Advantages of Junior- vs. Senior-Led Medical Textbooks

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Background and Purpose
Medical textbooks remain an integral component of the undergraduate education pathway. Most textbooks are planned, authored, and edited by a senior academic or clinician. They bring the asset of many years of accumulated expertise, knowledge, and experience in their specialist discipline. An inevitable consequence of these undoubted assets is that senior authors have only distant experience of the initial stages of engaging with their subject. This leads to a potential disconnection between the written text and current trends in curricula design and new approaches to learner engagement. However, juniors (students and junior doctors), have recently gone through the learning process, and have shown themselves to be effective educators in peer-led teaching. This study aimed to assess the relative merits of junior and senior-led approaches to textbook writing.

Methodology
152 students completed an electronic questionnaire over three weeks. The survey was advertised on a medical education Facebook page (the unofficial guide to medicine), and targeted to UK medical students. A combination of 1-5 Likert scales and multiple choice questions were used. 1 indicated a strong preference for junior-doctor led textbooks, 5 a strong preference for senior-doctor led textbooks.

Results
51.3% of students owned a junior led textbook, and 77% of students owned a senior led textbook. Students favoured junior-led textbooks for relevance for junior doctors (1.76), clarity in explaining complex ideas (2.48), and for enjoyment of reading (2.12). They preferred senior led textbooks for trustworthiness (3.49). Both were rated relatively similarly for overall quality (2.89).

Discussion and Conclusions
These results suggest that although senior-led textbooks still dominate the market, students are increasingly using junior-led titles. Advantages such as enjoyment of reading, and direct relevance to assessments/junior-doctor work may be driving usage. We feel the value of clinical experience from senior clinicians cannot be underestimated, and this is reflected in the findings that students rating trustworthiness of senior-led books highly. They also support our view that it is advisable to maintain senior involvement in junior-led textbooks to ensure accuracy, and broad curriculum cover.

References
Improving undergraduate medical students’ perceptions of and performance in numeracy skills with peer teaching and online formative assessments

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Background and Purpose
There is increasing concern that medical professionals lack the necessary numeracy skills to make competent treatment decisions, which could impact on patient safety1-5. Thus, the role of numeracy teaching within the medical curriculum has gained more emphasis6, 7.

Undergraduate medical students entering the BM6 widening access program at the University of Southampton display a broad range of mathematical abilities. A high proportion of students have an intrinsic fear and anxiety surrounding mathematics, which can have a negative impact on performance8, 9.

The aim of this project was to develop and evaluate a new tutorial system with peer teaching and online formative assessments to support students to develop confidence in numeracy at the beginning of their course. Our purpose was to provide students with essential numeracy skills, reduce anxiety and increase confidence in their numerical ability.

Methodology
A qualitative survey of students (n=59) assessed students’ perceived level of competence in numeracy. Following this a pre-test was performed. Students were then arranged into small groups of mixed ability, and the two higher scoring students in each group were given the task of peer teaching.

The groups worked through different numeracy topics during 5 tutorials over 10 weeks. These were supported by online formative assessments aligned to the module assessment. The students’ final exam scores were compared to their pre-test scores. Students’ perceptions of tutorials and competence in numeracy were explored in focus groups.

Results
Initial data indicate the tutorial system increases levels of confidence in numeracy and exam performance. Student and staff perceptions of the tutorial system and its effectiveness will be explored using qualitative data analysis.

Discussion and Conclusions
Developing skills and confidence in numeracy should be an integral component of medical education1-3, 5, 7. It is imperative to assess numeracy skills at the start of the programme so that tools can be put in place to support all student needs. Decreasing anxiety at this stage has the potential to increase future achievement8, 9.

Preliminary results from this study suggest that small peer teaching is an effective tool to help students develop mathematical ability10, 11. Peer students developed their numerical ability and confidence whilst peer teachers enhanced their own understanding and became more motivated and confident10, 11.

Further research is required to establish the validity of extending this approach beyond the year 0 of the BM6 programme and whether this will help students and junior doctors feel prepared for prescribing in clinical practice.

References
5. Thornton H. Doctors' numeracy and communication skills need to improve. BMJ. 2012; 344(may01 2): e3069-e.
Learn to love your Bleep: Is bleeping Medical Students a valuable way to teach them telephone triage and communication skills?

T Woodward, S Sanjeev, L James, P Rajyaguru, L Whitton, P Fletcher, CD Rodd, P Davies
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Background and Purpose
Communication skills teaching is an important part of the Medical Student curriculum. Communication and handover errors have a significant impact on patient safety.¹ Evidence is mixed on whether Medical Students are fully prepared to function as part of the team, and communication is an important part of this.² Current Medical curricula focus on face-to-face communication and yet telephone communication is also an important part of the role of a Junior Doctor. The purpose of this study was to evaluate whether students perceived the experience of carrying a bleep relevant and useful for improving their telephone triage skills. This should provide guidance for the necessity of further work on the project.

Methods
Semi-formal focus groups were conducted with Junior Doctors in order to assess what types of scenarios were most commonly encountered on call. Notes from these sessions were then used to compile scenarios simulating the type of telephone calls a Junior Doctor will receive from their bleep on call.

Bleeps were then handed out to Medical Students for one morning during their final year Junior Doctor shadowing placement. A Clinical Teaching Fellow bleeped the students throughout the morning and acted as a member of a fictional ward team, posing the scenarios to the students.

At the end of the morning Students and the Fellow reconvene to debrief and discuss all issues that have arisen. Feedback is collected after this regarding the individual scenarios’ usefulness and relevance as well as the tutorial.

Results
Preliminary data suggest that overall it is perceived as a useful experience for students. Data will be presented on what Junior Doctors felt to be the most important scenarios for students. Further more detailed data will be presented examining which scenarios are perceived to be the most useful and relevant by the students themselves.

Discussion and Conclusions
This study is providing an early indication that the use of bleeps is perceived as of educational value by students. It is only moderately faculty intensive. It is thought that this has high face validity for representing the tasks of a Junior Doctor and further data will investigate this. Further data are to be collected which will reinforce or refute these conclusions.

Death of the Short Case - Are Medical Students being exposed to sufficient preoperative surgical pathology?

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Background & Purpose
The GMC stipulates in its document “Tomorrow’s Doctors” that medical students must develop as practitioners. This stresses the importance of learning to interpret common clinical findings. An increasing pressure on beds in the NHS has decreased the duration of admissions, and created an increasing preponderance for day case surgery. This has resulted in a drop in rates of elective pre-admission to the ward and a subsequent fall in the level of exposure of Medical Students to preoperative surgical pathology. This study seeks to assess the extent of this and proposes methods to rectify this issue.

Methods
Third year Medical Students undertaking their Junior Medicine & Surgery module at the University of Bristol in Gloucestershire Academy were given a questionnaire at the end of the 18 week unit. The questionnaire used a visual analogue scale to assess confidence of students in the diagnosis of a list of common surgical pathologies on the basis of examination. It also asked students to estimate the number of patients that they had seen with this pathology.

Results
Preliminary survey data indicate poor exposure to common surgical pathology amongst this cohort. Nevertheless students frequently rate their confidence highly with respect to the clinical diagnosis of this pathology. Full results with additional data will be presented at the meeting.

Discussion & Conclusions
Students are not currently being exposed to a sufficient range of common surgical pathology. There may be a number of reasons for this, ranging from a change in focus in assessments, lower priority in curricula or NHS service changes. Further work should be undertaken to attempt to assess the cause of this and address this deficit in students’ education.

1. General Medical Council. Outcomes and Standards for Undergraduate Medical Education. Tomorrow’s Doctors (2009)
Cutting edge technology: Comparing three surgical simulators for simple cyst excision training in medical students.

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Background and Purpose
Basic surgical skills are taught to and used by a range of health care professionals including medical students. Surgical simulators offer students the opportunity to gain these skills in a safe environment with the opportunity for repeated practice\(^1\). Studies have shown no significant advantage between low-fidelity simulation and high-fidelity simulation when learning basic motor skills\(^2\). However, when teaching or assessing large numbers of students, reproducibility and cost can have implications on how sessions are organised\(^3\). This study aims to compare the use of homemade and manufactured sebaceous cyst models when teaching basic surgical skills to medical students, by exploring the transfer of learning, cost implications, and reproducibility.

Methods
Ten University of Bristol Medical students at Gloucestershire Academy will be invited to attend a surgical skills session focusing on sebaceous cyst excision. Students have previously attended a basic surgical skills course at Gloucestershire Academy and are familiar with the process of suturing. During the course of the session, they will be allocated three different sebaceous cyst models in a random order; one made from ‘K-Y jelly\(^\text{TM}\) inserted into the tip of a glove and buried into a low cost pad, one consisting of a paintball buried into a pig trotter\(^3\), and one pre-made model bought from a leading manufacturer. The students will be taught how to carry out a sebaceous cyst excision followed by closure with simple suturing. A questionnaire survey will be distributed to the students after completing the task on each model and before being allocated the next.

Results
Full results will be discussed as the ASME conference 2015, as well as implications on future teaching.

Conclusion
Teaching basic surgical skills to medical students can remain relatively low cost, but should be reproducible and cater for large numbers of students. Low cost simulators may have a role in teaching basic surgical skills, if they are found to be as effective as the high end simulators when teaching medical students.

References
Achieving constructive student feedback for clinical teachers: a suggested feedback form design

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Background and Purpose
Student feedback is an important tool for clinical teachers, particularly when it identifies areas for improvement that could be incorporated into their practice\(^1\). Feedback commonly takes the form of questionnaires with numerical ratings. Whilst this quantitative format aids collation and analysis, its summative nature limits its usefulness. It is also common to give all respondents a comprehensive questionnaire, leading to feedback fatigue further reducing the quality and usefulness of responses \(^2\). Thus the use of a more qualitative feedback questionnaire design is proposed, improving the quality and impact of written student feedback to better inform the development of a clinical teacher.

Methodology
Following a series of bedside tutorials delivered by clinical teaching fellows at a district general teaching hospital, a group of 31 third year medical students commented via a qualitative questionnaire on what was good and/or could be improved about different elements of the teaching. To avoid feedback fatigue, respondents were not given comprehensive questionnaires. The areas of feedback were divided amongst the respondents, with respondents providing feedback on different aspects of teaching. For comparison a control group of 23 students who had received the same teaching were given comprehensive quantitative questionnaires, which asked for numerical ratings of all aspects of the teaching and an overall qualitative comment.

Results
Generally, students’ engagement with the focused qualitative questionnaire was greater, and yielded more useful formative feedback regarding each aspect of teaching with positive comments as well as suggestions for improvement. Evidence of feedback fatigue could be seen with the comprehensive quantitative questionnaire as many students almost exclusively circled 5 out of 5 and provided very few comments which were superficial in nature. These same areas of teaching were similarly praised in the qualitative questionnaire, but in addition received comments also identifying areas for improvement.

Discussions and Conclusions
The use of a more focused and qualitative feedback form gives greater insight and provides more valuable constructive feedback to the teacher. It also showed that areas of strength and suggestions for improvement are not mutually exclusive. Some of the suggestions raised through formative feedback have since been incorporated into teaching practice, achieving the true aim of feedback far more successfully than summative forms previously allowed.

Building the ECG. A kinaesthetic approach to developing understanding of the ECG.

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Background and purpose
Interpreting the electrocardiogram (ECG) is a key skill required by all junior doctors. This is traditionally learnt through studying the basics of electrophysiology and working through many example ECGs. Constructing a 3-dimensional model to anatomically represent the 12 electrical leads of an ECG is a kinaesthetic teaching method not previously seen in the educational literature.

There are a few examples of the use of kinaesthetic learning in ECG teaching\(^1,2\) but these focus on the representation of rhythm\(^2\) and illustration of cardiac axis\(^1\).

This technique has been piloted with a small group of 3\(^{rd}\) year medical students, with positive student feedback. The purpose of this project is to more formally evaluate this teaching method.

Methodology
In order to interpret the ECG correctly it is important to understand the anatomical position of the leads. This kinaesthetic method requires the students to construct a 3-dimensional model representing the 12 electrical leads of an ECG using an apple and 9 labelled paper clips.

This will be a basic crossover study with one small group of students attending a traditional ECG teaching session followed by the kinaesthetic session, and the other group of students attending the sessions in the reverse order.

The students will be asked to complete an 'ECG quiz' and a self-assessed questionnaire regarding their confidence with ECG interpretation following each session.

Results
The crossover study design will allow for direct comparison with the analysis of the two teaching methods. The results of the quizzes and student questionnaires will be presented.

Discussion and conclusions
Understanding and interpreting the ECG is a daunting prospect for many medical students. Imaginative and varied methods of teaching are more likely to engage the learners for longer during the session\(^3\), and this should enhance learning. If creating a 3-dimensional model using an apple is deemed successful following analysis of the results, this method will be introduced in the local 2\(^{nd}\) year medical student teaching.

References
Do Jigsaw Models aid Medical Students in Learning Fracture Classifications?

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Background and Purpose
The diversity expressed within the medical student population poses a significant challenge to teachers and lecturers attempting to cater for all learning preferences\(^1\). Different learning styles are well researched and categorised. One example of this is the VARK model (Visual, Aural, Reading, Kinesthetic)\(^2\). Learners who are principally kinaesthetic make up a relatively small proportion of the medical student population, and as a result, teaching is often centred on other modalities\(^3\).

This teaching evaluation examines the relevancy, usefulness and satisfaction of a jigsaw based, kinaesthetic method of teaching fracture classifications to a group of undergraduate medical students.

Methodology
An evaluation of a teaching session with third year medical students at Bristol Medical School was conducted as part of the Musculoskeletal Diseases, Emergency Medicine and Ophthalmology (MDEMO) unit. At Gloucester Royal Hospital, 10 learners were taught three fracture classification systems; Weber (ankle), Salter-Harris (epiphysieal) and Gardner (neck of femur). Using an inventive kinaesthetic, jigsaw-based approach, three final year students delivered the 60-minute session as part of a peer learning scheme.

The students preferred teaching modality was assessed before the session using a VARK questionnaire. Information regarding previous knowledge of the classifications was also collected in order to measure the effectiveness of the teaching style. Following the session, opinions were sought on: effectiveness of teaching, relevance, enjoyment of session and educational content as well as open ended questions on positive areas of the session and suggestions for improvement. Data from before and after the session was compared and evaluated.

Results
Overall, 100% of students either agreed or strongly agreed that they enjoyed the session, it was relevant to their learning and that they preferred it to a lecture based approach. All students demonstrated an increased knowledge on the pre and post session exams. No statistically significant trend was observed between VARK results and either learning outcome or session enjoyment.

Discussion
Although this innovative session was not sufficiently powered to conclude it appeals specifically to the kinaesthetic learner, it was clear that enjoyment levels of the session were high, regardless of learning style. Further work could be done with this helpful learning tool to further assess the utility of VARK learning styles theory in improving students learning. The session reminds us that medical educators must continually evaluate whether their sessions appeal to all learning styles and we hope this is an idea which other educators may find useful.

2. Fleming, N. D. and Mills, C. E, ‘Not Another Inventory, Rather a Catalyst for Reflection’, To Improve the Academy, Vol. 11, p. 137
Students and Clinical Teaching Fellows views on 'Academic Families'

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Background and Purpose
Mentoring is concerned with making the most of human potential and is becoming more widely recognised in health care\(^{(1)}\). Pastoral care is crucial for the integration of medical students into the hospital environment in order to maximise learning through communities of practice.

This year, we have implemented an ’Academic Family’ programme in Swindon Academy. All Medical students (years 2-5) based at the Academy for the autumn term of 2014 were randomly allocated to one of 15 Clinical Teaching Fellows. Students were invited to voluntarily meet with their ’families’ on a number of occasions. The aim of the programme was to provide students with a mentor for guidance, teaching and pastoral support as well as introducing students from different year groups in the hope of providing a sense of community within the academy.

This study looks to identify the views of both Clinical Teaching Fellows and Medical Students with regard to the perceived usefulness of the Academic Family and in particular whether matching for gender, ethnicity or specialism of interest would be of any further benefit.

Methodology
This is a single cohort research project. Paper questionnaires and online monkey survey were sent to all 15 clinical teaching fellows at Swindon and (number involved) Bristol medical students who had been based at Swindon Academy for the autumn term of 2104 respectively. The questionnaire and survey consisted of both closed and open questions along with Likert scales of 1-10.

Results
Results from the questionnaires and surveys will be presented, as will recommendations for the potential development of the Academic Family programme.

Discussion and Conclusions
Many universities and organizations are moving towards providing support systems that place importance on personal growth and development.
Identifying Medical Student’s perceptions of the delivery of bedside teaching and observed clinical skills by non-consultant doctors.

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Background and Purpose
Delivery of bedside teaching to year 3 Keele medical students is often delivered by clinical teaching fellows (junior doctors in various stages of their postgraduate training). I have reflected on how students perceive bedside teaching which is not delivered by consultant clinicians. Specifically, whether they place as much value on the educational experience as they would if a consultant clinician had delivered the teaching. Perhaps consultants are perceived by students as being more aware of the expected level of competence with respect to clinical skills. Alternatively, students may feel more comfortable being observed and taught at the bedside by a junior doctor who may be perceived by the students as being more approachable, and less threatening? Can a greater understanding of student’s perceptions be used to guide future design and delivery of bedside teaching sessions? Current published literature addressing the issues of medical students perceptions of teaching are generally focussed on overall satisfaction with the teaching programme. Studies have been published that identify certain characteristics which students perceive to be important in a good clinical teacher as well as the fact that students regard an adequate presence of consultants in clinical areas to be of benefit to them educationally. Other authors have reported that students' value having dedicated teaching consultants, whilst others have looked at consultants perceptions of the role of junior doctors in the teaching of undergraduates.

However, there is a lack of published literature addressing my specific research questions:
1. Do 3rd year medical students place as much value on the educational experience of bedside teaching delivered by junior doctors, as they would if a consultant clinician had delivered the teaching?
2. What are the reasons for this?

Methodology
All 123 3rd year medical students at Keele University are included in the project. An original questionnaire will be distributed to all students. Data from returned questionnaires will be collected and analysed. The questionnaire has been designed in order to answer the research questions and the various facets thereof. It asks specifically about the value students place on the educational experience as a whole and specifically the value they place on feedback. It also asks about the trust they place on the validity of taught information, as well as students overall preferences for consultant vs teaching fellow-delivered teaching.

Results
The outcomes of this project are pending distribution, return and analysis of the questionnaire data.

References
2. Roodpeyma, S. & Salemi, H. 2011, “Medical students’ perceptions of their clinical training in the paediatric ward of a teaching hospital, Iran”, Middle East Journal of Family Medicine, Vol. 9, no. 6, pp. 28-32
Background and Purpose
Prescribing medications remains an erroneous process with the potential to compromise patient safety (1). Newly qualified junior doctors, who are responsible for the majority of prescribing in NHS Hospitals, do not feel that the undergraduate medical education adequately prepared them to undertake this complex task (2). In addition, error rates are highest amongst junior doctors (3). It is therefore essential to gain a better understanding of current teaching practices, which might enable evaluation and optimisation of undergraduate practical prescribing teaching.

The purpose of this study is to examine undergraduate teaching provisions for practical prescribing in UK medical schools. This is with a view to identifying which methods undergraduates and Curriculum Leads feel are most effective. This might inform on the development of a curriculum with an appropriate minimum standard for the teaching of practical prescribing.

Methodology
The study will use a mixed methods approach. Qualitative and quantitative methods will be used initially via a nationwide online questionnaire, to explore current practices in the teaching of practical prescribing in UK medical schools. The survey has been developed using Bristol Online Surveys, and has been sent to all medical undergraduates in their third, fourth and final year of medical school, and Curriculum Leads. A series of follow up focus groups of a random selection third, fourth and fifth year medical undergraduates will be used to further explore their views on the undergraduate curriculum with regard to practical prescribing. Descriptive statistics will be used to analyse the quantitative data from the questionnaires. Thematic analysis will be carried out on the qualitative data arising from the study using the NVIVO computer package.

Results
Results from the nationwide online questionnaire will be presented as well as the findings from the focus groups.

Discussion and Conclusions
It appears that the aspects of medical education relating to practical prescribing are not fit for purpose, and do not prepare graduates to undertake the complex skills that are fundamental to junior doctors. The GMC has proposed moving the point of full registration to graduation (4). This raises issues around the potential benefits of standardisation of the teaching provided by each medical school, particularly for a skill as vital as prescribing. A prelude to this lies in obtaining a better understanding of the methods currently employed, and which ones students find most effective.

References
(7) Dornan et al. (2009). The Equip Study. GMC [Online]
Final Year Student Mentoring – a flexible approach to facilitate near-peer teaching

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Introduction/background
The teaching of medical students by junior doctors can be a rewarding and useful experience for both parties involved and is a facet of good medical practice (1). Junior doctors have an array of contemporary knowledge and experience that can be shared with final year students both from the perspective of preparing for upcoming examinations but also starting work as a junior doctor (2). Exposure to teaching opportunities can vary according to the clinical rotations the junior doctor is allocated to, furthermore medical students have a variety of placements during their final year studies and some of these placements may offer reduced opportunities to practise core clinical skills that will be assessed in examinations.

Methods
Feedback gained from an established foundation doctor led evening teaching programme indicated that final year medical students found bedside teaching to be most useful, however this form of teaching was occurring infrequently. The foundation year 1 and year 2 doctors at Worthing Hospital were asked to volunteer to provide one-to-one teaching for one of the 44 final year students who were undertaking an 8 week clinical placement at the hospital. The students were given the contact details of their allocated mentor and encouraged to arrange teaching at mutually convenient times. The content of teaching was directed by the wishes of the student, with no specific guidance. Medical students were paired with alumni of the same medical school where possible. Feedback at the end of the placement was obtained from both the medical student and the foundation doctor via a short online feedback form.

Results
26 students completed the online feedback form. Mean number of teaching sessions per student was 4 (standard deviation (SD) ± 2) and a mean session time of 53 minutes (SD ± 16 minutes). 92% of students reported that the teaching aided their preparation for final year examinations and also their preparation for work as a junior doctor. All the students felt that their mentor had an appropriate level of expertise to facilitate the teaching.

Conclusion
A one-to-one mentoring programme provides increased near-peer teaching provision for final year medical students in areas that they perceive to be of most use when preparing for examinations and also starting work as a junior doctor. In addition the teaching opportunities are well received by the participating foundation doctors, allowing them to consolidate their own knowledge and develop as a medical educator.

Students’ perceptions of confidence quizzes using certainty-based marking schemes

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Background and Purpose
An essential aspect of good medical practice is the ability of an individual to recognize and work within the limits of their competency. Defining these limits requires reflection, self-awareness, and good clinical judgement. Medical students often find it difficult to transform knowledge they have accumulated in order to pass clinical examinations into the combination of knowledge and judgment needed for clinical decision-making.

Formative assessment using certainty-based marking (CBM) seems ideally suited to clinical learning and professional development of doctors at all levels of training because it can simulate the type of decision making that occurs in clinical practice. CBM encourages reflective assessment and stimulates awareness that uncertain answers and lucky guesses are not the same as true knowledge. It specifically encourages students to be confident when justified, and doubtful when necessary.

We aimed to determine whether the CBM approach: helped direct further study; was an effective method of exploring areas of practical decision-making that are poorly covered by the medical school curriculum; was perceived as being a useful and/or enjoyable method of self-assessment; and whether it was perceived as promoting the development of clinical judgement.

Methodology
An initial informal pilot was carried out with 124 first year medical students. We used an anonymous questionnaire immediately following completion of the online assessment to collate students’ opinions regarding this formative assessment method.

Results
78% of students agreed that the CBM quiz was beneficial to their learning and 68% found the quiz enjoyable. 79% reported fully understanding the benefits of marking scheme but 21% of student did report some confusion regarding the marking scheme. 8% of students found the quiz stressful and 26% somewhat stressful. 81% students reported that the quiz encouraged reflection on preparedness to practice, whilst 88% students felt the quiz made them reflect on the need to admit incomplete knowledge in clinical practice. 90% students reported that the quiz made them reflect on the need for confidence in clinical practice. 76% students would opt for more use of CBM quizzes in the curriculum.

Discussion and Conclusions
We found that the majority of medical students appreciate this approach: they understand that knowledge used for clinical decision-making needs to be more certain than knowledge assessed by examination, and recognise that incorrect knowledge possessed with confidence can be dangerous in clinical practice. This is reflected in their anonymous feedback comments.
Observer led debriefing in undergraduate simulation

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Background
Medical students value simulation as it provides them with the opportunity to ‘apply their theoretical knowledge to practice, in a safe and realistic environment’ 1. The current structure for delivering simulation involves students being allocated into small groups, and in turn taking on the role of the clinical team, whilst the remaining students observe via a live video feed. Following the simulation, the students come together for a facilitator-lead debriefing. As it is suggested that learning is enhanced when participants are engaged2, there is concern that there is a discrepancy in the learning experience had by those in the more passive observing role compared to those actively participating within the scenario. The authors hypothesise that through re-framing the observers’ role from that of a passive spectator to that of an active debriefer, engagement within the session will be enhanced, maximising learning.

Methods
4th year medical students of the University of Bristol on their Obstetrics and Gynaecology placement are observed participating in two simulation sessions. The first is followed by a traditional faculty-lead debriefing, whilst the second is followed by a novel observer-lead debriefing. Between the two sessions, the students receive a forty-five minute tutorial outlining the role of debriefing, as well as introducing a range of debriefing models. To ensure that the debriefing students feel confident critiquing the management and offering clinical clarity to the case, they are asked to prepare a brief presentation on the clinical topic in advance of the session.

Results
Video footage of the debriefing is being recorded and analysed, noting the time spent talking, as a percentage of the total, by participants, observers and faculty. Qualitative and quantitative feedback is also being collated. Data has been analysed for statistical significance using a paired t-test.

<table>
<thead>
<tr>
<th>Role</th>
<th>Time speaking 1st session (%)</th>
<th>Time speaking 2nd session (%)</th>
<th>P Value (2dp)</th>
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<tr>
<td>Facilitator</td>
<td>71.27</td>
<td>33.71</td>
<td>0.01</td>
</tr>
<tr>
<td>Active group</td>
<td>22.19</td>
<td>25.08</td>
<td>0.7</td>
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<tr>
<td>Observing group</td>
<td>6.63</td>
<td>31.21</td>
<td>0.01</td>
</tr>
</tbody>
</table>

Conclusion
Thus far, data suggests a statistically significant increase in observer participation within debrief, as well as a statistically significant decrease in time spent talking by faculty. With data collection ongoing, we hope to demonstrate that this model of debriefing improves engagement and satisfaction for undergraduates in simulation.

References:
Students Prefer Incorporation of Cases into Presentations – But Do They Help?

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Background
Presentations are a teaching tool frequently used to impart large quantities of knowledge to medical students. However, there is a danger that these can conform to the format of a lecture, with the associated well documented drawbacks\(^1\): including decline in student attention and a potential loss of interaction between tutor and students. The incorporation of cases is becoming increasingly popular as a method of encouraging student interaction\(^2\) and popularity amongst students is well established \(^3\). However, less is known about the efficacy of learning with the incorporation of cases into presentations. This crossover study aims to objectively assess the efficacy of incorporation of cases into presentations.

Methodology
From February to June 2015, 3 groups of 7 or 8 students, totalling 22, will be split into two groups. Both groups will be given a presentation on the same topic, with one group receiving a presentation incorporating cases and the other group receiving a presentation not incorporating cases. Both groups will be given the same assessment (in paper form) directly after their presentations, consisting of 5 Single Best Answer questions and 5 True/False question. Both groups will then be given another presentation. The group that had previously received a presentation incorporating cases will receive a presentation not incorporating cases. The group that had previously received a presentation not incorporating cases will receive a presentation that does incorporate cases. Both groups will again be given an assessment directly after their presentations, using the same format as aforementioned. Data collection will remain anonymised at all times.

Results
The crossover format of the study ensures that the students will act as their own controls. The collected data will be analysed for statistical significance using the paired t-Test against the null hypothesis of ‘there is no difference in scores with the incorporation of cases into presentations’.

Discussion and Conclusion
Whilst then popularity of incorporating cases into presentations are reasonably well established, the efficacy of the method is less well known and this study will attempt an initial assessment.

3. *Ibid*
Introducing a “Hot Topics” course to improve preparedness of final-year Peninsula medical students: evaluation of a new intervention

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Background and Purpose
The transition from final-year student to junior doctor is a notoriously testing time. Despite the introduction of “Transition Interventions”, (i.e. shadowing, assistantships and induction) new research from the GMC suggests that this period is still considered challenging by many trainees.(1) A recent systematic review has concluded that deficits in certain skills and knowledge were extremely pertinent to a newly qualified doctor’s feelings of preparedness,(2) with one study citing relevance of medical school teaching to real-life as a doctor as a major contributor.(3) Our intervention aimed to bridge this perceived gap between the knowledge acquired at medical school and the knowledge required for the F1 job.

Methodology
A new “Hot Topics” course was delivered to the 2014 Exeter cohort of final-year Peninsula students on their last day of medical school. It consisted of a series of lecture-based talks, with elements of interactivity, and was led by two Academic F2 doctors. Content was informed by Foundation Programme curriculum items, and the findings from a survey of current F1s from the local hospital. Evaluation tools were designed with a modified Kirkpatrick’s model in mind to gauge educational impact.(4) The primary outcome was change in self-reported levels of preparedness. Pre-and post-course questionnaires were distributed to rate overall preparedness in relation to starting F1 (Kirkpatrick2a). Sub-questions, measuring pre- and post-course ratings for preparedness on individual “Hot Topics” were also included (Kirkpatrick2a). Secondary outcomes were participant opinions related to the educational impact, acceptability and feasibility of the intervention (Kirkpatrick1). This data was elicited through targeted questions included in the post-course feedback forms, and students were also asked whether any knowledge was gained (Kirkpatrick2b). A follow-up survey was emailed to the cohort within six months, to assess whether they had applied any elements of the course since commencing work (Kirkpatrick3).

Results
Findings from the pre- and post-course questionnaires will be presented, as well as the results from the follow-up survey.

Discussion and Conclusions
The potential patient safety implications of inexperienced new doctors warrant targeted educational interventions to improve preparedness for practice. The “clash” between the learning emphasis of university-based medical education and the performance emphasis of workplace-based clinical training has been identified previously,(5) and is a potential area of focus. This study introduces a new “Hot Topics” course of relevant teaching for new doctors, delivered by near-peer tutors aimed at improving the skills and knowledge required to commence F1 safely. Success of this pilot has facilitated its implementation for the 2015 cohort.

References
(1) 2014 GMC. How prepared are UK medical graduates for practice? Available at: http://www.gmc-uk.org/about/research/25531.asp
Background and Purpose
Outpatient clinics are an educationally rich but often underutilized learning environment. This is secondary to time pressures, emphasis on service provision and lack of resources. The stresses on both teacher and learner can lead to poor student experience, ineffective learning with little student interaction and involvement. We suggest that a dedicated teaching outpatient clinic will improve the quality of the student outpatient experience by providing an opportunity for observed consultation and personalized student feedback.

Methods
Third year students on placement in a London Teaching Hospital were given a preliminary questionnaire ascertainning their previous experience of outpatient clinics. A weekly education fellow-lead dedicated teaching clinic was established. Within the clinic, the education fellow supervises 2-3 students leading a clinic consultation, observing history and examination skills, facilitating case discussion and giving personal feedback in written and verbal form. Patients are selected from one of two service provision clinics (in gastroenterology and respiratory medicine). Following the teaching clinic, students completed a second questionnaire evaluating their experience with a focus on the learning environment, degree of participation and quantity and quality of feedback.

Results
32 students attended a dedicated teaching clinic. The preliminary questionnaire demonstrated that only 7% of students had had the opportunity for active participation in a clinic and 82% did not receive useful feedback. Following the teaching clinic 100% strongly agreed or agreed that they had had the opportunity to actively participate and 96% strongly agreed or agreed that they received useful feedback. Furthermore 89% rated their overall experience of the teaching clinic as excellent.

Conclusions
Within the outpatient setting the demands of service and time pressures can lead to a suboptimal learning environment. We have demonstrated that a dedicated teaching clinic leads to an improved student experience with increased student participation, quantity and quality of feedback. Dedicated teaching clinics offer a solution in reconciling student educational requirements with the demands of service delivery. We are continuing to provide these teaching clinics to all third year students with further results to follow.

References
Is the Introduction of ‘TuteMate.com’ a beneficial addition to the student experience?

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Background
Medical students at the University of Bristol complete placements within hospital settings to gain experience in the clinical environment. To complement ward experience students attend scheduled clinical skills teaching, bedside teaching, and tutorials delivered by clinical staff.

Four cohorts of students complete placements at Yeovil Hospital per year. Feedback from the first and second cohorts suggested that rescheduling of tutorials (due to clinical staff commitments) was confusing. Often communication with the students was unsatisfactory resulting in missed tutorials or lack of awareness of sessions. This resulted in a poor student experience, and frustration for teachers.

We sought to improve the student experience, enhance communication, increase student attendance, and increase the availability of clinical tutorials with the introduction of TuteMate. TuteMate is a website designed to offer a schedule of teaching sessions which can be updated in real time. It offers students a reliable record of tutorial dates and times, and benefits teachers by storing feedback and attendance lists accompanying individual tutorials.

Methodology
Four cohorts were included in data collection. The first two cohorts received an end of placement questionnaire, and participated in a focus group to evaluate their experience whilst on placement. This data informed the introduction of TuteMate.

Further student cohorts, and clinical teachers’ opinions were evaluated with the use of end of placement questionnaires and feedback focus groups. Questionnaires were designed to assess student and staff satisfaction and the effectiveness of TuteMate for communication about tutorials. Five point Likert Scales and free text answers were utilised to generate both quantitative and qualitative data.

Attendance was recorded at tutorials throughout the year, and data compared to attendance at sessions before and after introduction of TuteMate.

Results
Preliminary data suggests that clinical staff and students are keen to engage with the introduction of TuteMate. Student attendance data collected prior to the introduction of TuteMate showed poor attendance at scheduled sessions, which we aim to address. Further results will be discussed in the poster.

Discussion
We hypothesise that the introduction of TuteMate will increase the amount of non-compulsory clinical teaching, which is an important aspect in career progression of a doctor. Students who feel more valued by clinical staff experience increased morale and enjoyment of the clinical placement. We aim for TuteMate to bridge the gap between the structured university timetable and the self-directed schedule employed on clinical placements, aiding in the transition in learning which the students experience.

References
1. www.TuteMate.Com
2. General Medical Council “Good Medical Practice”
Evaluation of an Expedition Medicine SSC for 3rd and 4th Year Medical Students.

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Background and Purpose
Expedition Medicine is a rapidly growing field. As more adventurous and far-reaching expeditions reach the holiday market, demand for appropriately qualified medical support is rising.1 The GMC’s ‘Tomorrow’s Doctors’ states that student selected components (SSCs) must be an integral part of the curriculum, enabling intellectual development of students through exploring a subject of their choice.2 We designed an SSC in expedition medicine for medical students at the University of Bristol. The aim of this study was to assess the value of the course. Although there are a number of training courses for expedition medics, we are unaware of any studies evaluating the effectiveness of an integrated expedition medicine SSC currently running as part of the university curriculum.

Methodology
Twenty 3rd and 4th year students were selected for the SSC. After a week of simulation training, lectures and practical sessions, they undertook a 5-day course in La Clusaz, France. The course was delivered by Faraway Medicine, a company consisting of experienced expedition medics and expedition leaders. It was delivered through lectures, small group teaching and simulation scenarios. Students then completed a scientific project or literature review within the field of expedition medicine.

Students were given an online questionnaire asking them to rate their confidence in dealing with expedition medicine scenarios on likert scales (1-10), before and after the course. They were also asked to rate their agreement with statements about the effectiveness of the course (Likert scale, 1-5). Data was analysed using a Mann Whitney test. Students were also invited to give qualitative feedback.

Results
95% (n=18) completed the survey. All students showed statistically significant improvement in confidence in all areas (p<0.05), with a mean improvement in confidence score of 225%.

100% of students agreed that the course had made them more enthusiastic about medicine, had taught them transferrable skills and would recommend the course to their peers.

Discussion and Conclusions
As well as significant increases in confidence in expedition medicine, the benefits of the course stretched beyond the taught material. Students and instructors commented on how leadership skills, organisation and team working improved dramatically during the SSC. Students reflected that the course prompted them to think about career options such as emergency medicine.

The opportunity to do something ‘different’ gave the students refreshed enthusiasm and motivation for medicine as well as equipping them with valuable new skills. Next year participation will be widened to include 60 students.

References
2. General Medical Council (2009), Tomorrow’s doctors: outcomes and standards for undergraduate medical education. GMC.
Exploring the value of an undergraduate pilot e-Portfolio programme at Newcastle University upon attitudes to the e-Portfolio in Foundation Year One

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Background and Purpose
The e-Portfolio has become an integral component of the Foundation programme that, since its inception in 2006, has been developed and applied to over 35,000 medical, nursing, dental and pharmacy trainees across the UK. In the years following its inception, fragments of the e-Portfolio have appeared in the undergraduate curriculum of many UK Medical Schools so that Medical Students may be better prepared for their Foundation Years. This study aims to identify the attitudes to, values of and preparedness of a pilot e-Portfolio programme commenced on final year medical students at Newcastle University in 2013 in order to evaluate and inform staff as to the utility of this tool as an undergraduate component of the curriculum with a view to expanding the pilot.

Methodology
In order to assess the value of the pilot study, a potential cohort of 58 supervisors who currently supervise the second iteration (2014/15) of the pilot scheme, 40 students who had taken part in the pilot e-Portfolio in 2013/14 at Newcastle University and 70 students who are currently doing the 2014/15 pilot were identified and then a link to the questionnaire was distributed via email directly covering four key areas: ascertaining motivation to take part in the pilot study, adapting to the e-Portfolio educational processes, attitudes towards the processes and opinions regarding supervision.

Participants were informed that the questionnaire was anonymous, and that the data would be used to evaluate the value of the pilot programme. Multiple efforts were made in order to maximise the response rate.

Results
Results from the three surveys will be presented along with the proposed educational interventions to increase the effectiveness of the pilot scheme.

Discussion and Conclusions
As the healthcare education system across the UK continues to change rapidly, bridging the gap between undergraduate and postgraduate study is becoming increasingly essential. Evaluations of e-Portfolios, both undergraduate and postgraduate, thus far have been mixed with only a minority of trainees saying that they have found the e-Portfolio useful. The data obtained from these surveys will hopefully aid the understanding of the reasons behind this and enable us to see the effect of early exposure to an e-Portfolio like platform. Identifying the reasons behind use of the e-Portfolio, the supervision process and formulating a paradigm between undergraduate and postgraduate use are the pivotal issues being addressed in this study.

Developing an online intervention to promote physical activity in medical students: a feasibility study

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Background and purpose
The benefits of regular exercise on health and well-being are well recognised. Compared with other groups, however, little work has focused on how to encourage health care workers to do more physical activity (PA). It has been suggested that doctors should be prepared to address lifestyle changes with their patients to achieve better health outcomes. The interplay between physical activity as students and subsequently as doctors and the additional influence physically active doctors may have on patients is of interest. Education and training in PA in UK medical schools is reported as inadequate. We therefore sought to determine the feasibility of conducting a randomised-controlled trial (RCT) to evaluate and improve PA levels and knowledge in medical students.

Methodology
An intervention has been designed in the form of a “fitness button” on the Virtual Learning Environment. Third year medical students use this on a daily basis while on clinical placement. The fitness button acts as a prompt and a link to targeted advice about increasing PA. This study is designed to explore the feasibility of this approach prior to embarking on a full scale RCT.

Twenty third-year medical students, randomised to intervention and control groups, are being studied over a 4 week period using pedometers to measure daily step-counts. Students are assessed on their attitudes to PA and knowledge of current PA guidelines. The intervention group are exposed to the “fitness” button on the home page of their Medical Education Portal. Following this brief intervention feedback will be obtained from students through the use of focus groups.

Results
Determination of feasibility will be based on the ease of recruitment, ease of student engagement with the study, adherence to use of the pedometers; reported contamination between intervention and control groups and usability of the online prompt. A secondary outcome will be the measurement of physical activity in the control and intervention groups.

Discussion and conclusion
The merits or otherwise of this approach will be discussed and the issues in developing a full scale RCT will be explored. There is the possibility of harnessing online learning activity to actually promote exercise in students potentially resulting in more active doctors.
Does working as a Healthcare Support Worker in year 2 make a difference to how medical students adapt to working and learning on wards when they enter year 3?

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Background and purpose
Medical school programmes traditionally delineate classroom based and clinical learning. Transition into the clinical environment is often difficult and stressful, and can impede effective learning as students take time to gain a sense of belonging in the clinical community. To complement existing early patient contact in hospital and primary care, the University of Southampton has implemented compulsory placements as Healthcare Support Workers (HCSW) in year 2. This aims to help students become acclimatised to hospital environments early on, integrating them into clinical teams; aiming to reduce their sense of alienation on progression into their main clinical placements in year 3. It also aims to better prepare students for communication and physical contact with patients. There is evidence that early healthcare placements may be beneficial to students later in their clinical training: Positive experiences have been noted from nursing internships in Germany. However, it seems few establishments, if any, have put this into practice. A stage 2 pilot with 60 volunteer students was conducted in 2013-14. This study aims to examine the experience of transition into year 3 learning with a view to examining the impact of the HCSW work on students’ early clinical experiences.

Methodology
A qualitative exploratory study seeking to establish the impact of the pilot by comparing the experiences of those who participated and those who did not. Individual in depth interviews with students from two groups were conducted, building on the questionnaire evaluation of earlier pilots previously reported. The first group is comprised of students who completed the pilot (n=6) and the second of students who had volunteered but were not included in the random selection (n=6). Data will be analysed thematically.

Results
Results from the interviews will be presented.

Discussion and Conclusions
The data will provide initial information about the impact of working as an HCSW in year 2 on students’ transitions into clinical placements in year 3, building on data already gathered; and will be the second phase of evaluation, subsequent elements of which will include evaluation of the impact of the placements on the clinical staff on wards.

References
The use of simulation to teach medical students how to recognise and manage a sick child – A cluster randomised trial

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Aims
Many medical students lack confidence in their ability to recognise and manage acutely unwell patients, particularly children. With less time available for training and reduced exposure to sick children, simulation is being used effectively to develop technical and non-technical skills in postgraduate paediatric training.

Our aim was to evaluate the impact of a one-day paediatric simulation course on medical students’ self-reported ability and confidence in recognising and managing sick children.

Method
We conducted a cluster-randomised study of the impact of a novel undergraduate paediatric simulation course. All students undertaking their paediatric placement at a district general hospital over a six month period were invited to take part. Students were cluster randomised into the intervention (simulation) group or control group (standard paediatric attachment).

Students in the intervention group attended a one-day simulation course during the last week of their attachment. The course included clinical skills stations, a discussion on human factors, and five simulations of common paediatric emergencies, each followed by a structured debrief.

All participants completed a questionnaire at the end of their attachment and those in the intervention completed a further questionnaire after the simulation day.

The primary outcome measure was students’ self-reported ability and confidence in recognising, assessing and managing sick children. The secondary outcome measured was their views on the course.

Results
Sixty one students participated: 32 in the intervention group and 29 in the control group. Self-assessed confidence in recognising a sick child was higher after the simulation course compared to controls (difference in confidence 0.75/5, 95% CI 0.40-1.10, p=0.0002). Similarly, those in the intervention group were more confident in assessing and managing a sick child (difference in confidence 1.02/5, 95% CI 0.74-1.31, p<0.0001).

Six key themes were identified from the qualitative responses, including increased confidence in emergency situations and an appreciation of human factors. Students found the simulation useful and wanted it offered to all undergraduates during child health attachments.

Conclusion
A one-day simulation course improves medical students’ confidence in assessing and managing unwell children and is highly valued by students. Further studies are needed to evaluate its impact on clinical performance and confidence over time.

Escalation of Care and Do Not Attempt Resuscitation Decisions: The Role of the Junior Doctor

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Background and Purpose
Every patient in whom a cardiorespiratory arrest is a clear possibility should have a decision about resuscitation and when possible this should be clearly discussed with the patient1. Evidence suggests that confidence in discussion of such decisions with patients is low, particularly amongst house officers2. Evidence also suggests there are significant differences in confidence and ability to make the decision not to preform Cardiopulmonary Resuscitation (CPR) between specialties3. Given the implication of such a decision, we propose that this difficult topic should be formally taught to final year medical students to improve their awareness of their role as a junior doctor and provide them with a framework to build on during their clinical practice. As resuscitation decisions, escalation of care and organ donation are intricately related, we took the opportunity to integrate teaching on these topics in an interactive workshop.

Methodology
32 final year medical students attended one of three half-day workshops with the following structure: 1. Introduction followed by a short Multiple Choice Question (MCQ) test to assess prior knowledge on DNACPR decisions and organ donation. 2. Video simulation and discussion where an opportunity to make an appropriate DNACPR decision was missed leading to the inappropriate attempted resuscitation of a patient. 3. An interactive talk by an intensive care specialist on escalation of care. 4. An example of a ‘good’ DNACPR discussion between a doctor and a patient. The group was then split to cycle through sessions with: 5. A specialist nurse for organ donation. 6. Case based discussions on ceiling of care. 7. Role-play to practice DNACPR discussions with individual feedback. 8. The workshop was concluded with a further MCQ test as well as a questionnaire using the 10-point Likert Scale to assess confidence.

Results
Results show the mean test scores before and after were 38% and 85% respectively (P< 0.0001). Students’ average confidence in discussing DNACPR with patients was 7.9/10 after the session with a mean improvement of 3.1 points (P< 0.0001). Students strongly agreed (9.3/10) that the role-play was valuable and that the session was highly relevant (9.2/10).

Discussion
Confidence in decisions relating to resuscitation and escalation of care in junior doctors is low. Our results show that formal teaching for final year medical students around these issues improves their awareness of their role as a junior doctor and provides them with fundamental skills and confidence to build upon during clinical practice.

References:
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