Annual Scientific Meeting 2009
The Royal College of Physicians
9 Queen Street, Edinburgh

15-17 July 2009
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<tr>
<th>Time</th>
<th>Session Title</th>
<th>Chair</th>
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<tr>
<td>12.05-12.15pm</td>
<td>Tailed feedback for struggling undergraduate medical students</td>
<td>Trudie Roberts</td>
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<td>12.35-12.45pm</td>
<td>The purpose, meaning, and added value of placement learning: a qualitative study</td>
<td>D Lewis MEDEV Winner</td>
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<td>12.45-12.55pm</td>
<td>Working as a newly appointed Consultant: an investigation into the transition from Specialist Registrar (SpR) to Hospital Consultant</td>
<td>S Yardley Small Grant</td>
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<td>12.55-13.05pm</td>
<td>&quot;Say 99% What medical students say to patients during physical examination&quot;</td>
<td>J Brown Small Grant</td>
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<td>12.55-13.05pm</td>
<td>Unravelling &quot;learning by doing&quot;, Programmatic research on junior doctor's workplace learning in postgraduate medical education</td>
<td>A de la Croix Small Grant</td>
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<td>12.55-13.05pm</td>
<td>Physical or virtual ACS? A centralised, formative assessment of medical students' advanced clinical skills</td>
<td>P W Teunissen New Researcher</td>
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<td>12.55-13.05pm</td>
<td>PBL, it's all &quot;talk&quot;: Corpora Analysis of PBL transcripts</td>
<td>Cj King Sir John Ellis Runner Up</td>
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<td>13.05-13.15pm</td>
<td>The Big Fish, Little Pond Effect - does it apply in medical schools?</td>
<td>I Wilson</td>
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<td>&quot;Oh I’d better wash my hands because you’re there&quot;: affects of medical students' acts of resistance during medical workplace learning encounters</td>
<td>L V Monnissa</td>
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<td>Responding to the challenge of innovating in medical education - the &quot;7-0&quot; model</td>
<td>R M Harden</td>
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<td>Unprofessional behaviour in medical students: questionnaire survey comparing perceptions of the medical students, doctors, healthcare professionals and the public</td>
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<td>The first two years use of UKCAT scores in student selection by UK medical and dental schools</td>
<td>J McKimm</td>
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<td>Using UKCAT Scores to Predict First Year Exam Performance</td>
<td>C Elton</td>
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<td>The Efficacy of a Machine Marked Test for Recruitment into Acute Specialities in the South West Peninsula Deanery</td>
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<td>The novel use of Latent Class Analysis to evaluate the effectiveness of student selection to an undergraduate medicine course</td>
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<td>Multiple mini-interview for medical student selection</td>
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<td>Students' perspectives on preparing for and getting into medical school</td>
<td>N Gannier</td>
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<td>The causes of and factors associated with persisting errors: Systematic Review</td>
<td>J Adam</td>
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<td>The purpose, meaning, and added value of placement learning: a qualitative study</td>
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<td>Out of sight: an innovative approach to teaching internal examinations</td>
<td>M Roberts</td>
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<td>Clinical communication for international students in the UK undergraduate curriculum</td>
<td>K MacLeod</td>
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<td>Trainee views on the standard of specialty training: A focus group study</td>
<td>J Dowell</td>
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<td>Acute Emergencies Training Foundation Year On medical trainees</td>
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<td>Introduction of a portfolio-based accreditation process for supervisors in secondary care; a report from the London Deanery pilot study</td>
<td>P J Lewis</td>
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<td>A proposal for a study to test the applicability of Ericsson's 'deliberate practice' to the acquisition of subspecialist surgical skills</td>
<td>T Hughes</td>
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<td>What is a good GP? Developing and accepting a multi-source feedback instrument for GP Appraisal in Scotland</td>
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<td>Factors influencing junior doctors calling for help in acute situations</td>
<td>C Thomson</td>
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<td><strong>International Medical Education</strong>&lt;br&gt;RCPE Main Lecture Theatre</td>
<td>Show casing safety research: an online, case-based approach&lt;br&gt;M Ahmed</td>
<td>Medicine in Malawi, a new approach to electives&lt;br&gt;L McCorry</td>
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<td><strong>Assessment</strong>&lt;br&gt;RCPE Meeting Rms 1 &amp; 2</td>
<td>Development Phase of Dundee PolyProfessionalism Inventory II: Academic Integrity for Junior Undergraduates in the Health Professions&lt;br&gt;M N Chandratilake</td>
<td>Practical Issues and Perceptions of Workplace-Based Assessments in Current Foundation Year Trainee Doctors&lt;br&gt;J Kyaw Tun</td>
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<td><strong>Postgraduate Education</strong>&lt;br&gt;RCPE Meeting Rms 4 &amp; 5</td>
<td>Medical graduates' preparedness for practice: questionnaire responses from three UK medical schools&lt;br&gt;B Burford</td>
<td>Do medical graduates need more on-the-job experience? A prospective qualitative study comparing three diverse UK medical schools&lt;br&gt;J Illing</td>
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<td><strong>Curriculum Planning</strong>&lt;br&gt;RCPE Seminar Room</td>
<td>States at a fork in the road - the teaching of professionalism in undergraduate medical education&lt;br&gt;I Robb4</td>
<td>CBME: Integrating Professionalism and Health Promotion&lt;br&gt;T Holt</td>
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<td><strong>New Technologies</strong>&lt;br&gt;RCPE Cullen Suite</td>
<td>Supporting scholarship in medical education: The role of social media and networks&lt;br&gt;A M Cunningham</td>
<td>Audit of a web-based electronic PBL system in clinical medicine: usage and student opinions&lt;br&gt;J White</td>
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<td><strong>Arts &amp; Humanities; Basic Science Education</strong>&lt;br&gt;BMA Council Chamber</td>
<td>&quot;He couldn't move his legs ha ha ha ha ha&quot;: The function of laughter in medical students' accounts of professionalism dilemmas&lt;br&gt;C E Rees</td>
<td>The Other Side of the Fence&lt;br&gt;A Jack</td>
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<td><strong>Assessment &amp; Communication Skills; Teaching About Specific Subjects</strong>&lt;br&gt;BMA Ground Floor Mtg Room</td>
<td>The communication skills of medical students: video analysis, OSCE scores and attachment styles&lt;br&gt;P Leadbetter</td>
<td>Development of a Core Undergraduate Curriculum for Prescribing (British Pharmacological Society Prescribing Initiative)&lt;br&gt;S Ross</td>
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**Thursday 16th July 2009, 12.15pm - 1.20pm**
### Schedule of Events

**Friday 17th July 2009, 9.35am - 11.45am**

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<th>10.00-10.10am</th>
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<td>Introduction of a Personal and Professional Development Portfolio: Student views on potential barriers and facilitators</td>
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<td>Implementing a national skills strategy - identifying skills priorities for remote and rural practitioners</td>
<td>D Cunningham</td>
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Arts and Humanities
"He couldn't move his legs ha ha ha ha ha": The function of laughter in medical students’ accounts of professionalism dilemmas

C E Rees, L V Monrouxe, L Rees-Davies

Division of Medical Education, School of Medicine, Cardiff University, UK

C E Rees, OPME, Mackie Building (K01), The University of Sydney, Sydney, NSW 2006,

Introduction
Professionalism dilemmas are common across the medical education continuum, often causing students distress, challenging the ways they think about professionalism, and shaping their future professional attitudes and behaviours. This study addresses a gap in the literature by exploring medical students’ explanations of their own and others’ behaviours during professionalism dilemmas. This paper focuses on one aspect of how students talked about professional dilemma situations in interview settings: the function of laughter. By analysing laughter, we gain an understanding of the data beyond the mere reporting of what is said.

Methods
Our study involves three medical schools in different countries (England, Wales, and Australia). Individual interviews and focus groups employing narrative interviewing techniques are ongoing (to be completed May 2009). So far, we have conducted 12 focus groups and 5 interviews in England (n=87), and 6 focus groups and 15 interviews in Australia (n=39). Data is currently being collected in Wales. Framework Analysis is being carried out and includes a consideration of both what students say (content) and how they say it (process).

Results
Preliminary Framework analysis has identified three content themes: (1) Definitions of professionalism; (2) Medical students’ dilemma situations; and (3) Students’ talk about patients and healthcare professionals; and two process themes: (4) Reported thoughts and speech; and (5) Process-related humour and laughter. A further analysis of this fifth theme suggests that laughter doesn’t just result from humour, but serves a number of rhetorical functions within interview settings. Laughter acts as a mechanism through which medical students share understanding, co-construct professional identities, and maintain or subvert power asymmetries. Laughter also helps students cope contextually and non-contextually in the interviews. So, laughter helps to smooth over interactional difficulties (e.g. when students lose their train of thought: contextual coping). Laughter also enables students to cope when recounting difficult professionalism dilemmas (e.g. conducting intimate examinations on patients without consent: non-contextual coping).

Discussion
The function of laughter in these settings is consistent with previous research. However, focusing on laughter in the current study not only provides unexpected insights into group solidarity and function, professional identities and power, but also reveals insights into the emotional impact of professionalism dilemmas on students. We, therefore, urge medical education researchers to move beyond examining what interview participants say; to include how they talk. By analysing process and content together, we are sure to gain a richer picture of our qualitative inquiries into medical education.

References:
2. Wilkinson CE, Rees CE & Knight LV. “From the heart of my bottom”: Negotiating humour in focus group discussions. Qualitative Health Research 2007; 17:411-422.
Assessment
Increasing the clinical relevance of MCQs for first year medical curricula

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Context
A current trend is for undergraduate medical curricula to integrate basic and clinical sciences from as early as the first year, often through providing clinical relevance in the form of problem based learning (PBL) or clinical cases that highlight the relevance of science to medical practice. This has implications for how such curricula are assessed, as questions that assess knowledge free of any clinical context dominate most existing assessment item banks. This study sought to explore the effect on assessment of attempting to improve the alignment of learning and assessment for students in a new, hybrid undergraduate medical course.

Methods
Year 1 students were offered a voluntary 30 item practice MCQ examination towards the end of the academic year. The 30 items were written in two item formats – with and without brief clinical scenario stems – but with the same questions being asked and with the same correct answers. Students were randomised to two groups, taking 15 questions in each of the two formats, but crossing over such that each question was attempted only once. Data collected included: completion time; number correct; and responses to a questionnaire seeking student perception on the time required, clarity, ease of choice and curriculum relevance.

Results
There were no differences in the mean scores for both groups of students. The mean time taken to complete longer stem version question sets was about 20% longer. Students perceived that the clinical scenarios resulted in some slowing, little effect on choosing the correct answer, and improved question clarity and relevance to the curriculum.

Conclusions
It may be beneficial to assess Year 1 students in integrated undergraduate medical curricula using MCQ questions containing brief clinical scenario stems that reflect the learning process of an integrated curriculum, so long as either item numbers or timing are adjusted. Such adjustments should not affect reliability significantly, although that needs to be tested in a larger study, but may affect sampling breadth and therefore content validity. There may be advantages in introducing integrated questions to Year 1 students as these will feature prominently in later professional practice assessment.
An inter-professional approach to supporting language and communication skills learning in direct entry overseas medical students

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Background
Clinical communication is central to medical education in the UK. Poor language ability at entry and lack of appropriate communicative styles correlate with poor performance in international students. To address this, Aberdeen University delivers a support programme in linguistic and communication skills for direct-entry overseas (IMU) medical students pre-MBChB entry.

Until 2007, the induction course for International Malaysian University (IMU) students (n=10 per academic year) included separate consultation and language skills teaching with limited co-ordination of content. This teaching was not highly-rated by students or tutors. Significant numbers subsequently failed communication components of exams and required remedial support. This data indicated the need to revise the Support Programme.

Methods
Discussion with key stakeholders, including students, indicated that aligning the content of language and communication skills teaching, and redesigning the language component to be directly relevant to medicine, was feasible and acceptable. Tutorials were delivered jointly by two tutors: one each from both departments.

Outcomes
The main outcome measure, number of students referred for extra tuition in communication and language skills, indicated that there was no significant difference in numbers referred before and after the Support Programme was revised. We discuss possible reasons for this, and ways forward.
Online OSCE Examiner Training – A step too far?

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A large part of the summative assessment undertaken by students on the undergraduate medical programme at The University of Leeds is in the form of practical examination, known as Objective Structured Clinical Examinations (OSCEs). These take place in the 3rd, 4th and 5th years of the programme. Students are examined in a variety of contexts by an assessor (usually a practicing doctor) who scores a checklist of performance and an overall grade.

Currently, the Continuing Professional Development (CPD) department within the School of Medicine at the University of Leeds provides training to those assessing OSCEs in examination technique. The purpose of this training is to prepare clinicians for the experience of exams, but also to maintain the reliability and validity of the exams by reducing assessor variance in marking. To this end the University of Leeds provide new examiners with face to face training in examination procedures, standard setting and the role of the examiner in OSCEs. However, over the last 12 months the CPD department has recognised the need to maintain assessors’ examination skills in the long term. OSCE processes are becoming more involved for examiners with the advent of video stations and those assessing multiple modalities and it was felt that assessors would benefit from an annual update, highlighting advances in examination procedures and providing an opportunity to brush up on marking skills and exam etiquette.

The CPD team decided to provide the annual update in the form of an online course. The course designed was an interactive e-learning programme featuring video clips, quizzes and a message board. The course is currently being considered for CPD accreditation by the Royal College of Physicians. In creating this course it was essential to consider several key areas, such as confidentiality and quality of content, the learner experience, and from a quality assurance perspective tracking student participation. Therefore decisions such as what software to use and adapting checklists to protect exam processes were complex and influential. Qualitative evaluative research is currently being conducted into the usability and quality of the online OSCE Examiner update.

The aim of this presentation is to highlight the issues considered when developing an online OSCE update and to share initial research findings from users in terms of quality and usability.
Defining Competence for Workplace Assessment – A Pragmatic yet Robust Method

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Competency based assessment relies on the definition of the level of competence to be achieved. The lack of an appropriate process to define competence in the workplace undermines the value of workplace assessment for both trainer and trainee. This lack of confidence in competence aims can be reduced if they are themselves subject to a process of validation, and derived using recognised research methods. Rigorous academic methods exist, but are time consuming, require research skills, and are subject to burdensome research governance processes. A robust, yet pragmatic alternative approach is presented.

Methods
This 2 phase triangulated method combined semi-structured interviews (phase 1) with a modified Delphi technique (phase 2) in the context of defining competence for trainees in anaesthesia. Specifically, the method defined competence for provision of anaesthesia for vascular surgery and anaesthesia for patients with significant vascular disease. Recently appointed consultant anaesthetists were interviewed in the first phase and a heterogeneous group of consultant anaesthetists took part in the modified Delphi process. The outcome is a list of competence targets with objectives that indicate the performance required for their attainment.

Results
Phase 1 led to the production of 4 competences and 18 objectives. 16 of the 18 objectives were amended by the second phase and 10 additional objectives added. This gave an agreed final list of 4 competences and 28 objectives.

Conclusions
The results demonstrate that the described method is effective in defining competence for workplace assessments. It represents a workable compromise between feasibility and stringent research methodology. It is straightforward to undertake and we believe the results are valid and fit for purpose. Wider implementation of this method could enhance the validity and value of workplace assessments.

References
Pūkawakawa - innovative but academically equivalent

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Driven by the shortage of regional, rural and indigenous doctors in New Zealand, the University of Auckland designed a year-long regional-rural medical programme Pūkawakawa, for Year 5 medical students in partnership with the local Northland health board, primary health providers, Māori health providers and iwi (tribes).

Pūkawakawa is based on a ‘hub and spoke’ design. The ‘hub’ is a 223-bed regional hospital and the ‘spokes’ are three small rural hospitals/general practices. Of the Northland population of 148,500, 2/3 live in rural settings, 1/3 are Māori and 2/3 are in the two lowest socio-economic deciles.

Although Pūkawakawa has similar learning outcomes to the standard programme and there are common year-end assessments, the standard year 5 attachments were modified to maximise the strengths in regional and small rural hospitals/general practices. Curriculum developments included three integrated attachments - two at the “hub” and one at a “spoke”, two longitudinal cases followed over 16 weeks; and a self-directed ‘log book’ outlining common symptoms, presentations and procedural skills.

Pūkawakawa ran for the first time in 2008. Students were volunteers selected after an interview with senior faculty. None had any academic or professional concerns noted prior to the programme. There were 9 students from the rural origin medical entry pathway, 5 Māori and Pacific students, 5 from the usual entry pathway and one international student.

One aspect of the multi-facetted evaluation of Pūkawakawa is student achievement. Of the 20 students in the new programme, all passed Year 5 and two (10%) achieved Distinction for their Overall Grade (clinical work plus written papers; c.f. whole class 17%). When individual rankings for Pūkawakawa students in the Year 5 written papers were compared with Year 4 written papers, 8 students (40%) improved more than 10 places, 7 (35%) students stayed the same, and 5 (25%) dropped more than 10 places. For the rest of the class the proportions were 29%, 41% and 30% respectively (P = 0.0527). Of the 5 indigenous students, 4 increased their rank and 1 stayed the same.

The initial cohort has performed at least as well as their standard programme counterparts. There are encouraging signs of specific benefits to indigenous students of such a programme. The performance and career choices of this and subsequent cohorts of Pūkawakawa students will be followed closely over the next few years to determine the wider effects on professional development and career location.
Evaluation of e-Learning in the Delivery of Induction and Mandatory Training for a Foundation School

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Introduction

Induction to the workplace has an established role in increasing patient and doctor safety. It is especially important in the difficult transition from student to Foundation Year 1 (FY1) doctor. Medics traditionally have not engaged well with induction, often rushed with little regard to learning, by employers focused on litigation regulators. In 2008 the North Western Foundation School piloted delivery of generic web-based e-learning across 16 Trusts in 2 phases. Packages included Transfusion, Consent, Fire Safety, Infection Control, Manual Handling, Health & Safety, Medicine Management, Maths for Medicine, Essence of Care, Death Certification, Respect for People, Information Governance, Law, Negligence, Safeguarding Vulnerable Adults, Child Protection, Mental Capacity Act and Disability Awareness. Modules carried assessments and passes were recorded in the trainee’s e-portfolio.

Method

An independent case study approach and three stage evaluation was performed. Focus groups, individual interviews and online questionnaires generated qualitative data. The key stakeholder groups comprised of FYs, project manager, School Director, Programme Directors and Administrators from the trusts piloted.

Results

Average completion of phase 1 and 2 were 96% and 75% respectively, overall compliance 85% (N=7200). Programmes with a good reaction and recommended were Maths for Medicine, Medicines Management, Death Certification and Infection Control. Law, Essence of Care and Child Protection scored poorly. The relevance, the content and context of the packages were criticised. There was confusion amongst users over the purpose of e-learning and whether it supplemented or replaced teaching sessions. Access to the packages was difficult for many with loss of progress data, slow modules and ‘freezing’. Many had to complete the work at home due to IT problems or not having enough time in the Trust.

Conclusion

Variable quality and lack of time and resources have challenged foundation programme directors to deliver induction that improves and standardises teaching whilst assessing learning. There is an increasing trend for the use of e-learning but this is not without problems. Enhancements to develop the programme, guided by not only administrators and directors but FY1 doctors, are much needed to ensure that a reliable package is created that can be sustained. Changes to be made include clarification on the role, compliance with computer systems, package content, protected time and availability of IT support. By implementing these changes, a thorough training package for all foundation trainees can be provided that is fit for purpose and ultimately prioritises patient safety.
Introduction of an online summative assessment in an undergraduate setting: Is validity maintained?

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Introduction
The introduction of online summative assessment for undergraduates is a rapidly expanding field. Drivers for the change in assessment format include expanding student numbers and declining numbers of university staff.

Aim
To compare the student’s performance in the traditional short answer format and the new online EMQ/MCQ format.

Methods
We introduced the online assessment in the academic year 2006-7. Data from students in the previous academic year was used as the control group. Identical questions were used in the control year for the study year. Half of the questions were converted into the online questions (MCQ/EMQ). The other half were administered, as previously, in the short answer format. Thus the students sitting the Obstetrics and Gynaecology exam in 2006/7 were examined using both an online assessment and a traditional short-answer assessment. Assessment performance was compared using the individual question mean mark and question facility for the short answer and online questions. The question facility is a measure of the question difficulty.

Results
The mean mark per question correlated highly when the short answer to short answer questions were compared, r=0.968 (95% CI: 0.944-0.982). Thus short answer question performance was similar in the control year and the study year.

Correlation between the mean mark per question when the short answer questions in the control year were compared to the online format in the study year was also high, r=0.965 (95% CI: 0.940-0.980), suggesting similar performance for short answer questions when converted into online EMQ/MCQ questions.

The question facility was comparable when the short answer questions were compared in the control and trial year, r=0.81 (95% CI: 0.698-0.891). When the short answer question facility was compared with the online question facility, the correlation was weaker r=0.495 (95% CI: 0.262-0.674). This indicates that the change in the exam format may have a weak effect on the question facility.

Conclusion
Online examination is often used in the formative setting but in a summative examination more vigorous testing is required. Our data suggest that it is possible to introduce an online summative examination and, importantly, the validity of the exam is maintained in this process.
Objective Structured Skills Examinations – An Approach to Consistent Grading

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Abstract

Objective Structured Skills Examinations (OSSEs) are used early in the medical curriculum to assess students' competence in practical tests of their laboratory, communication and clinical skills. Originally we used a checklist for each station against which assessors allocated marks depending on whether the student did not (0 mark), or did demonstrate that item partially (1 mark) or completely (2 marks). Standard setting was done by the borderline groups or borderline regression method to determine the cutting score for each station. Assessors were trained to allocate marks to items on checklist and to provide a global indication of competence on a 6-point scale (inadequate, poor, borderline, satisfactory, good or excellent).

This approach suffered three major problems: 1) different skills were assessed against checklists of very different complexity or length; 2) global judgements correlated poorly with checklist marks; 3) compensation between stations left very few students in the overall borderline or unsatisfactory categories. As a result, a significant fraction of the variance of the marks was examiner-dependent. This undermined confidence in the use of the aggregate score to determine candidate progression. Feedback indicated that assessors felt obliged to allocate marks on the checklist however confidently or otherwise the candidate accomplished those tasks.

To address these difficulties we modified the checklist. Specific elements of each station were grouped together into items and assessors were asked to judge how well candidates had performed those items using the 6-point, inadequate to excellent scale. An assessment grid was written so that for each point on the scale there were clear criteria against which assessors could make their judgement for every item on the checklist for each station. Assessors therefore judged the items and their global impression for each station on the same scale. We expected this approach considerably to reduce assessor-dependent variance and to improve the correlation between the ‘specific’ and ‘global’ grades.

Outcomes using a checklist and assessment grid showed a substantial increase in the correlation between the global judgements and the scores for items in each station. We saw no particular reason for excellent performance at one station to compensate for weak performance at another. Consequently candidate progression is now defined by the number of competently performed stations (12/18, 15/20 etc.) and not the aggregate mark. We believe that this approach to scoring OSSEs allows assessors to make more rounded and holistic judgements of candidates' competence.
Introduction
Problems with team working undermine patient safety and many reports recommend team training to address such deficiencies. However, it is not clear in healthcare what interventions might be used or how team performance can be measured. This study is to assess the effectiveness of simulation based team training for health care teams and to develop an effective teamwork assessment tool.

Methods
40 established critical care teams (1 registrar and 3 nurses), 2 teams per study day, were involved in a double-blinded randomised pseudo-crossover design research study. We specifically designed a one-day simulation based course. Each team works together at one of 9 ICUs in the greater Auckland region. After orientation, Team A and B both had initial cardiac and rapid sequence induction (RSI) simulated scenarios. Team A then had 3x RSI problem based learning tutorials (control) followed by 3x cardiac scenarios (intervention). Team B had 3x cardiac PBLs (control) and 3x RSI scenarios (intervention). Both teams then had post intervention cardiac and RSI scenarios.

Technical and behavioural rating instruments were developed specific to intensive care teams following a process of literature review, group discussion, group video analysis, pilot participant feedback, and expert feedback. Participants were asked to rate their team's performance after each scenario and to complete an end-of-day questionnaire, and a further questionnaire was sent to participants at 3-6 months. A subset of participants undertook a telephone interview.

We assessed control versus intervention, pre versus post intervention, self versus rater, and technical versus behavioural scores. All raters were blinded to pre and post intervention and RSI versus cardiac simulation training. Raters, based in Auckland and Edinburgh, input data via a specifically designed website; www.intensivist.com

Results to date
Questionnaire data analysis shows that candidates find this training "very valuable". Interim analysis shows good inter-rater reliability using the teamwork assessment tool.

Discussion
Team training is well received when simulation is used. Ongoing assessment of intensive care multidisciplinary team performance rating tool is under way. International collaboration is simple and effective using simulation research as scenarios are recorded and can be reviewed anywhere. Use of website technology simplifies distant data collection.

This research has been funded by a $35,000 Education and Simulation Research Grant by the Australian and New Zealand College of Anaesthetists.

References
Verifiable evidence for appraisal: the views of Scottish GP appraisers on the role of feedback by trained peers

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Introduction
The GP appraisal system in Scotland is considered inadequate because it lacks robustness and objectivity. Addressing this will require objective assessment of evidence to be included to enable judgements on professional performance. In the west of Scotland, a model based on educational principles provides GPs with independent feedback from trained peers on the quality of three core appraisal activities. Further evidence of the model’s utility is necessary. We aimed to evaluate GP appraisers’ views of the acceptability, feasibility and educational impact of external peer feedback received on three core appraisal activities undertaken as part of this study.

Method
We randomly split all 164 GP appraisers in NHS Scotland into three groups and allocated one of three appraisal activities (SEA, criterion audit or videotaped consultations) to each. We invited appraisers to undertake the allocated activity and submit this to an established peer review model for assessment using validated instruments by trained colleagues to facilitate developmental feedback. We then undertook a postal questionnaire survey of participants in March 2008, three days after peer feedback reports were sent, to evaluate their views and experiences of the process and their opinions on its value if aligned to the appraisal system.

Results
Of 164 appraisers, 80 agreed to participate. 67/80 (84%) submitted one of three appraisal materials for peer review and returned completed questionnaires. For significant event analyses (n=44), most respondents believed feedback was fair (92.5%), facilitated improvement (72.7%) and would add value to appraisal (95.5%). Feedback on criterion audits (n=15) was believed to provide specific advice on improving audit skills (100%) and facilitated reported improvements in respondents’ audit practices (12, 80%). Completing a consultation video (n=8) was perceived to be feasible as part of normal general practice (n=5, 62.5%). It was unanimously agreed that assessment of videos by peers is educationally useful and would help improve appraisal.

Discussion
This group of GP appraisers strongly supported the role of external and independent feedback by trained peers as one approach to strengthening the existing appraisal process in NHS Scotland. The findings add weight to the growing evidence base for this educational approach, which should be of interest to educationalists, decision-makers and professional and regulatory authorities.
The effect of a scoring system combining confidence and safety

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Introduction
Non-constructed response tests with number-correct scoring are widely used in high-stakes examinations. Concerns about number-correct scoring include the implications for guessing and whether an incorrect unsafe response is a true belief or a random guess.

Research Question
Can a scoring system that reflects candidate confidence and response safety be developed?

Methods
We developed a new scoring system in which scores ranged from +3 for answers that were correct with high confidence, to –18 for answers that were incorrect despite high confidence in correctness, and highly unsafe. Descriptors for levels of confidence included the degree of likelihood of contacting a colleague/reference. Incorrect responses were reviewed in advance for level of safety. An optional MCQ paper was offered to all medical students at University of Otago. A randomized cross-over design with four versions of the paper was used. Each paper had two sets of 12 questions in different order, one set to be answered with number-correct scoring instructions and the other with the new system instructions.

Results
374 students completed the study. Score reliability was sufficient (alpha = 0.80). The year of the candidate and scoring system instructions both led to differences in responses. The new system instructions led to more correct, fewer incorrect, don’t know and unsafe responses (paired t test for individuals, all p<0.001; unpaired t tests for groups all p<0.001, except don’t know p=0.004). Increasing year led to more correct, fewer incorrect, don’t know and unsafe responses (all p<0.001). The students demonstrated a degree of resolution with a correct rate of 25% when a response was chosen with low confidence, 46% when chosen with moderate confidence, and 76% if chosen with high confidence. If incorrect the likelihood of being unsafe to any degree fell from 35% for low confidence responses, to 26% for moderate confidence, and 15% for high confidence. 67% of students had no unsafe responses of any degree.

Discussion
A scoring system that reflects confidence and safety proved practical to use. It had the effect of increasing the number of correct responses whilst reducing the number of incorrect, and in particular unsafe, responses. The student cohort did have insight into their knowledge with correlation between confidence and likelihood of correct responses and inverse correlation with likelihood of unsafe responses.

Conclusion
The new system led to improved response patterns. However, this system has not been used in high-stakes examination used to make pass/fail decisions.
The Feasibility & Reliability of an Extension OSCE at Finals

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Background
Following the inception of the Foundation Programme for medical graduates in the UK, pressure is on medical schools to have increasingly robust pass-fail decisions in final examinations, as a repeat of the final year is a major issue for students and for schools. Additionally, complex OSCEs have major resource implications for all institutions. At King’s College London School of Medicine (KCL) there has been a major OSCE as part of Final MBBS for many years, with satisfactory reliability, now with different diets on each of five or six days for over 400 candidates. KCL regulations restrict students to two attempts at any examination.

Process
We wished to examine further those students close to both sides of the pass mark. Since failure at a re-sit examination close in time to the original would result in expulsion from the school, preventing a repeat year being taken, so an extension examination was designed for those students close to the pass mark, both above and below it. We drew on our bank of stations to produce a diet that none of the students had seen in the main exam. The design of this extension produced the following challenges, which will be described in more detail at the conference:

- a major re-write of examination regulations
- consideration of the cut-off either side of the pass mark for entry to the extension
- what to do with those students who fell below the lower cut-off (i.e. had failed badly)
- where to set the ultimate overall pass mark
- the timing of the extension in relation to the main examination, graduation, pre-registration etc.

In June 08, 20 students were required to take the extension examination. The reliability (expressed as Cronbach’s Alpha) was known for each day of our exam in previous years (in the previous three years, within the range 0.67-0.81). In June 2008 it lay between 0.67 - 0.78. The Cronbach’s Alpha of the extension exam alone was 0.54, but it has to be considered that this group of weak candidates was close in ability, which would of itself reduce the reliability, detracting from the utility of this calculation.

Conclusion
This innovation has paved the way for shortening our main OSCE, reducing the load on the majority of the students, and reducing the resource demands for the School.
The utility of workplace-based assessment in specialty training

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Educationalists highlight the importance of linking learning and assessment in the workplace. This notion of learning and assessment going hand in hand incorporates educational concepts of equilibrium, accommodation and assimilation. Evaluation of workplace-based assessment (WPBA) tools should address not only achievement of competence, but also processes used to develop complex skills as learners progress.

From novice to expert, there is a body of literature on the psychometrics of WBPA tools as a means of assessing competence in clinical skills. Evidence on how these tools are being used in practice is, however, limited. For example, how are they being used to track the progress of trainees? Who is assessing the trainees and are the tools providing a basis for feedback mechanisms for identifying individualised future training needs? Is there consideration of clinical complexity as trainees get more experienced? What kind of clinical contexts are appropriate for the use of such forms? How do these individual assessment tools fit into an overall assessment of clinical competence and expertise?

Concerns exist to the applicability of the pure psychometric model to the evaluation of assessment. A theoretical framework for evaluating the utility of tools for assessment of complex professional competencies incorporates several variables, represented by the formula:

\[ U=Rw \times Vw \times Ew \times Aw \times Cw \]

Where, \( U = \text{Utility} \), \( R = \text{Reliability} \), \( V = \text{Validity} \), \( E = \text{Educational impact} \), \( A = \text{Acceptability} \), \( C = \text{Cost} \), \( w = \text{weight} \)

These variables need to be considered when evaluating the effectiveness of WPBA tools.

This study addresses the following research questions:

1. How are the WPBA tools used by the Royal College of Obstetricians and Gynaecologists (RCOG) being implemented in practice?
2. What is the perceived utility of these tools in specialist training?

Completed assessment forms (Objective Structured Assessment of Technical Skills (OSATS)), mini-CEX and Case-based discussion (CBD) from Obstetrics and Gynaecology trainees in two deaneries (Yorkshire and London) have been collected and analysed using generalisability theory and other statistical methodologies to estimate the reliability and validity of the assessment forms. The paper will discuss the results of these analyses in the light of the practicalities of using psychometrics to analyse such assessment tools and the implications for incorporating WPBA tools in practice settings.

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Can we Assess Acute Care Skills using Simulation?
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Introduction
The foundation programme aims to equip trainees to recognise and manage acute illness. However, work-based opportunities are inconsistent and exceptional supervision is needed to maintain patient safety where foundation doctors are delivering acute care. This limits the scope for acute care training and assessment during the foundation programme. Simulation is already an established adjunct for delivering acute care training. This study reports an evaluation of simulation-based assessment.

Methods
The acute care competencies from the Foundation curriculum were grouped into nine domains. Twenty scenarios were developed involving the rapid assessment and initial management of acutely unwell patients in a variety of clinical settings. Ten senior clinicians from different clinical backgrounds used a Delphi technique to develop a scoring instrument based on published criteria. Ten year-two SHOs, nine experienced critical care doctors, and nine medical students were recruited. Following orientation, each participant performed six ten-minute scenarios which were recorded. Participants provided information about their experience and confidence, and rated the realism of each scenario. Recordings were subsequently scored by four independent raters. Validity was evaluated by perceived realism and the relationship between participant scores and indicators of participant experience. Reliability was evaluated using generalisability analysis to examine the impact of participant ability (true variance), and various sources of measurement error on the scores.

Results
Scores were positively related to participant confidence, and to all measures of participant experience (including actual frequency of dealing with critically ill patients in recent posts) at the p<0.05 level. Many of these indicators are inter-correlated, but seniority and previous use of the simulator facility remain significant independent predictors of performance when categorical regression is applied. The G-study components are presented below. Participant ability has, by far, the most significant impact on scores.

<table>
<thead>
<tr>
<th>Component</th>
<th>Estimate</th>
<th>%</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Var (Participant)</td>
<td>157</td>
<td>60%</td>
<td>participant ability</td>
</tr>
<tr>
<td>Var (scenario)</td>
<td>9</td>
<td>4%</td>
<td>scenario difficulty</td>
</tr>
<tr>
<td>Var (rater)</td>
<td>0</td>
<td>0%</td>
<td>rater stringency</td>
</tr>
<tr>
<td>Var (Participant * scenario)</td>
<td>42</td>
<td>16%</td>
<td>participant scenario-aptitude</td>
</tr>
<tr>
<td>Var (Participant * rater)</td>
<td>17</td>
<td>6%</td>
<td>rater subjectivity over candidate</td>
</tr>
<tr>
<td>Var (scenario * rater)</td>
<td>6</td>
<td>2%</td>
<td>rater subjectivity over station</td>
</tr>
<tr>
<td>Var (Participant * scenario * rater)</td>
<td>30</td>
<td>12%</td>
<td>rater subjectivity over candidate scenario-aptitude</td>
</tr>
<tr>
<td>Var (Error)</td>
<td>0</td>
<td>0%</td>
<td>residual variation</td>
</tr>
</tbody>
</table>

The reliability of the assessment with varying numbers of scenarios and assessors is set out below.

<table>
<thead>
<tr>
<th>scenarios</th>
<th>2</th>
<th>4</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>raters per scenario</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>0.77</td>
<td>0.87</td>
<td>0.91</td>
</tr>
<tr>
<td>2</td>
<td>0.82</td>
<td>0.90</td>
<td>0.93</td>
</tr>
<tr>
<td>3</td>
<td>0.84</td>
<td>0.91</td>
<td>0.94</td>
</tr>
<tr>
<td>4</td>
<td>0.85</td>
<td>0.92</td>
<td>0.94</td>
</tr>
<tr>
<td>5</td>
<td>0.86</td>
<td>0.92</td>
<td>0.95</td>
</tr>
</tbody>
</table>

Conclusions
Simulation-based assessment of acute care skills appears to be highly reliable and there is evidence that it provides a valid measure of acute care skill. We are going on to evaluate this assessment with a large cohort of F2 doctors and compare it to the results of their workplace-based assessments.
‘Hawks’ and ‘doves’: effect of feedback on grades awarded by supervisors of student selected components

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Background
Supervisors of some student selected components (SSCs) may appear to give higher grades than others. It is not known if feedback can influence the behaviour of supervisors in the grades they award. We have introduced feedback letters in our institution.

Aims
(1) To assess the feasibility of objectively identifying SSCs where grades awarded are consistently higher or lower than the average; (2) To assess the effect of feedback on the grades awarded by supervisors of SSCs.

Methods
The breakdown of SSC grades was examined over four consecutive years, before and after feedback letters were introduced in 2005. The grades awarded globally, and in ten individual SSCs, were compared using the χ² statistic.

Results
(1) Individual SSCs were identified which awarded grades that were consistently different from the average. (2) Overall grades awarded in 2003/04 and 2004/05 (before feedback) were similar (χ²=0.37, df=2, p=0.83). Likewise, overall grades awarded in 2005/06 and 2006/07 (after feedback) were similar (χ²=1.72, df=2, p=0.42). Comparison of 2003/04 with 2005/06 (χ²=16.0, df=2, p<0.001), and 2006/07 (χ²=26.6, df=2, p<0.001), and of 2004/05 with 2005/06 (χ²=13.5, df=2, p=0.001), and 2006/07 (χ²=23.7, df=2, p=0.001), revealed highly significant differences.

Conclusions
The χ² statistic may be used to identify individual SSCs where the grades awarded are different from the average, although the interpretation of the results thus obtained is fraught with difficulty. Our data also suggest that it is possible to influence assessors in the grades they award.
How Objective is the OSCE?

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Aim
To investigate possible bias among examiners due to subjective judgements in an OSCE.

Setting
A second year principle course and first year Graduate Entry OSCE style examination, testing six clinical skills.

Method
Each of 422 students from the year 2 principle MB ChB course and year 1 Graduate Entry Course is examined by two examiners. The students were tested in six simple clinical skills using a graded mark sheet. Overall there are 54 examiners and each examiner examined 16 students in 3 skills. Various statistical methods, including the Kolmogorov-Smirnov test, Spearman's rank correlation, Wilcoxon rank sum test, and t-test were used to analyse the data. Statistical and other measures were taken to carefully separate all the factors that may affect the reliability of the results, such as the normality of the score's distribution, the possible difference of difficulties in different skills, and the possible discrepancy of student's ability, etc., from examiner's performance.

Results
After conducting a series of statistical analyses to the OSCE examination data, we found that the inconsistency of judgement among examiners was quite serious and that it might have significantly affected students’ overall performance. Our results show that the judgements among examiners are quite inconsistent from each other and that more than 83% of examiners gave students marks that could be considered either too high or too low. Male examiners gave higher marks to students than female examiners and this was done mainly by their giving too high marks to female students. We also found that female students as a whole performed better than male students but this generally reflected the better performance on female students.

Discussion
These results demonstrate the influence of examiner bias on a subjective examination like the OSCE. These results reinforce the need for examiner training, and including as many stations as possible and enabling a student to be tested by as many examiners as possible to dilute examiner bias. It is also beneficial for pairing ‘hawk’ examiners with ‘doves’ ones based on historical data.

Future work will investigate whether other confounding factors like age and ethnicity of examiner affects their behaviour.
Feedback on Clinical Skills (FCS): A Centralized, Formative Assessment of Medical Students’ Advanced Clinical Skills

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Introduction
The Feedback on Clinical Skills (FCS) is a multiple step clinical experience designed to assess each third year medical student’s ability to work through a patient case from start to finish, using advanced cognitive, clinical and communication skills. The FCS was designed to address a lack of observation of clinical trainees by providing them with two opportunities to work through complete, simulated patient cases.

Goals and Objectives
In the FCS, each student conducts a history and physical exam with a simulated patient, followed by a series of steps that comprise ordering laboratory tests, accessing, assessing and synthesizing evidence, and finally integrating all of this evidence and information into a comprehensive plan for treatment. A faculty preceptor observes (via live video feed) the student’s knowledge and skills in obtaining and processing information, evaluating and synthesizing the patient’s problem. The experience culminates with an oral presentation of the patient to the faculty preceptor, followed immediately by formative feedback to the student about specific and overall performance. The student then writes a learning plan, based on self-reflection, self-assessment, and feedback received.

Methods
Two FCS experiences occur during the third year of medical school; the first approximately three months into the students’ clinical training and the second at six months. Student performance is assessed by their faculty preceptor at each point in the assessment, culminating in a feedback discussion and development of a learning plan. Students and faculty work together to achieve goals set forth in the learning plans prior to the students’ second FCS experience.

Evaluation
Evaluation of the FCS experience will include several quality assurance measures. Faculty case owners will review their cases to ensure that checklists for history taking and physical examinations are appropriate and that the patient simulation is performed adequately. Student performance data will be studied to determine trends in student performance and collaboration with clinical clerkships will occur to address any individual student or curricular deficiencies. Faculty and simulated patient feedback will be reviewed for effectiveness and issues will be addressed in faculty development and patient training sessions.

Conclusions
The FCS is a program by which clinical competencies comprising clinical skills, communication skills and professionalism are addressed. The comprehensive formative feedback assists students in improving their learning through feedback discussions, reflective practice and self-directed learning toward established learning goals.
Problem Based Learning (PBL) is one of the most researched areas of medical education with numerous papers and meta-analyses concerned with its overall effectiveness in comparison to traditional methods. Fewer studies, however, have looked at the processes occurring within the PBL group. However research has not yet managed to provide strong evidence for curriculum effectiveness. However, one of the key differences between PBL and traditional teaching methods is the amount of talking students engage in. A typical scenario involves 4.5 hrs talking a week. There has been little research into the nature of this talking and the processes occurring within it. Research has not yet capture or analyzed the cognitive activities that take place during this “talking”.

We have begun a program of transcription and analysis of PBL sessions using Wmatrix2® a powerful text analysis tool, used for corpora analysis. Applying corpora analysis to transcriptions of PBL tutorials, allows us to quantify the use of technical vocabulary, clinical reasoning, questioning and explaining episode. Using this technique we can analyze very large sets of data using a combined quantitative and qualitative perspective that otherwise would be very time consuming. Our long term aim is to use this research technique to monitor the development of clinical reasoning as students progress through a PBL curriculum.

The results to be presented will be an analysis of transcriptions derived from three early consecutive PBL sessions dealing with a single scenario. We will present comparative data on the frequency of technical words and the incidence and examples of clinical reasoning utterances. We propose that this methodology will become a powerful tool to help explore the cognitive and linguistic development of students as they engage in PBL discourse.

References
Development Phase of Dundee PolyProfessionalism Inventory I: Academic Integrity for Junior Undergraduates in the Health Professions

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Many governing bodies of healthcare professionals in UK have highlighted the necessity and importance of emphasising professionalism at undergraduate level\textsuperscript{1,2,3}. Even the domains of professionalism related to health care have been identified by some of them\textsuperscript{1,2,4}. However, there is actually very little elaboration of what constitutes good or poor professionalism in each of these domains, and very few actual teaching materials especially at the entry level—the first and second years of undergraduate education. On the other hand, it is important that the teaching and the assessment should be normed to consensus standards of professionalism in the context in which they will be applied. A preliminary review of more than 30 assessment studies in Professionalism, has produced neither cost-effective models suitable for large classes of >150 students nor normed inventory or rating systems.

Our aim is to develop and validate robust, normed, cost-effective strategies for teaching, learning and assessing elements of PolyProfessionalism\textsuperscript{5} at the first, pre-clinical stage of health professions education. By combining several methodologies in the research literature, we have designed an inventory that: helps the respondent to recognise/learn good/poor polyprofessionalism—i.e. teaches the content of Polyprofessionalism; is normed within the context—i.e. identifies the consensus of ‘acceptable/unacceptable’ answers in a given school/region/speciality/country cohort; enables the respondent to locate him/herself in the normed consensus for feedback; permits staging analyses as the respondents move from novice to expert; is machine markable/electronically deliverable and therefore cost-effective; is valid and reliable.

This is “[A]n approach that merges the two propositions and offers a way forward: Assess each principle of professionalism at each stage of a medical career, but contextualize the principles, set stage-specific achievement levels, and approach assessment of professionalism from a developmental perspective\textsuperscript{6}. It also begins to meet the GMC’s call for strategies to balance a positive approach to professional behaviour of medical students with more specific advice for medical schools on how to develop consistent fitness to practise procedures\textsuperscript{7}. It will also help to substantiate the “Good Character” required to the Nursing and Midwifery Council, UK\textsuperscript{3}.

This inventory is piloted in Dundee medical, dental and nursing schools. The paper reports the findings of the Development Phase of Dundee PolyProfessionalism Inventory I: Academic Integrity for Junior Undergraduates in the Health Professions in relation to its validity, reliability, acceptability, feasibility and cost-effectiveness.

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Practical Issues and Perceptions of Workplace Based Assessments in Current Foundation Year Trainee Doctors

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Introduction
The introduction of Workplace Based Assessments (WBAs) has been integral to the recent reforms in medical education in the UK under the label of Modernising Medical Careers1. WBAs theoretically offer advantages in comparison to other assessment methods, i.e. it can measure performance at the highest level of Miller's pyramid2. Previous studies have shown WBAs to have an acceptable level of validity and reliability3,4. However, recently there has been increasing evidence highlighting issues with acceptability and difficulties in carrying out WBAs amongst Foundation Year 2 (FY2) Trainees5. The aim of this study is to identify and explore the underlying practical issues of carrying out WBAs in Foundation Training and FY2s' perceptions of this form of assessment.

Study Design and Methods
This is a multi-centre questionnaire based study. The questionnaire design was based on an initial focus group meeting with FY2s in one hospital. The questionnaire was then piloted in one hospital prior to being distributed to 2nd year FY2s in 9 hospitals within one Foundation School.

Results and Discussion
41 questionnaires from 6 hospitals were completed and returned. All trainees were able to complete the required number of WBAs in order to complete their first year of Foundation Training. However, most trainees (95.1%) encountered difficulties in carrying out WBAs. The difficulties arise for a number of reasons - the lack of time, difficulty in finding computer access and difficulty in finding an assessor are particularly prevalent factors (Figure 1). The perceived usefulness of WBAs, satisfaction and quality of feedback is also poor. Recurring themes in free text comments highlighted a low level of acceptability and general discontent with the current methods of carrying out WBAs. When carrying out WBAs, assessors are more commonly chosen for their accessibility and amiability than for their appropriateness. 30 FY2s (73.1%) reported that assessment forms were sometimes completed by assessors without the assessor fully assessing and observing the trainee. This raises the question of reliability of WBAs in practice.

Conclusion
This study demonstrates a number of problematic issues with WBAs in Foundation Training which significantly reduce their validity and reliability. Strategies need to be developed in order to overcome the practical difficulties faced by trainees and supervisors in undertaking these assessments.

Figure 1: Factors Contributing to Difficulties in Carrying out WBAs
Legend: a) Difficulty in finding assessor, b) Lack of Time, c) Lack of appropriate clinical scenarios, d) Lack of appropriate assessment settings, e) Lack of easy computer access, f) Other

References
The educational implications of lack of perceived usefulness, reliability and validity of the Foundation Programme workplace-based assessments

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Purpose
The aim of this paper is to explore the views of both trainee doctors (F1s and F2) who were assessed and more senior doctors (those training for a specialty and consultants) who assessed them in order to identify the perceived usefulness, best practice and potential shortcomings of four out of five compulsory work-based assessment instruments (DOPS, Mini-CEXs, Case Based Discussion and 360° multi-source feedback)

Methods
All F1s, F2s, STs, SpRs and Consultants in the East Midlands Healthcare Workforce Deanery were sent an e-questionnaire in 2007-2008 asking them to rate on a 5 points Likert scale the preparedness of F1s in terms of the competencies they should have acquired at medical school as set out in Tomorrow’s Doctors. The questionnaire also asked them what they thought of the assessments. The questionnaire also offered all the participants the opportunity to take part in a semi-structured interview that further explored the views of F1s, F2s, STs, SpRs and Consultants about the Foundation Programme and the preparedness for practice of F1s. During these interviews the participants were asked about what they thought of the implementation of the work-based assessments of the Foundation Programme.

The paper reports on the views of assessment as expressed by those who returned the questionnaires (F1s and F2s – n=112 – and STs, SpRs and Consultants – n=98) and by those who took part in semi-structured interviews (F1s, F2s, STs, SpRs, Consultants).

Results
Our findings show that almost half of the STS, SPRs and Consultants underlined that these assessments were not useful or a waste of time compared to only 16% of the F1s and F2s. A quarter of the STs/SpRs and Consultants thought they were very useful or quite useful if done properly compared to only 13% for the F1s and F2s.

Conclusion
Work-based assessments take place in an authentic medical context. They are expected to have reliability, validity, educational impact, cost-efficiency and acceptability (See Reece and Walker 2004). Our findings call into question the face validity and reliability and educational impact of the Foundation Programme assessments.

Reference
Assessment and Communication Skills
The communication skills of medical students: video analysis, OSCE scores and attachment styles

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Research questions
(1) Is there a relationship between examiner communication skills scores and coded video communication scores in an OSCE?
(2) Do securely attached students score higher than insecurely attached students on both coded video communication scores and examiner scores in an OSCE?

Background
There is solid evidence linking effective patient–doctor communication to better health and well-being outcomes for the patient, and for the delivery of high quality medical care (GMC, 2003; Haidet et al, 2002; Maguire & Pitceathly, 2002; Haidet et al, 2002). Studies have also demonstrated the importance of the practitioner-patient communication for better health outcomes, compliance and greater satisfaction for the physician (Deveugele et al 2005).

Attachment theory provides a model for understanding the ways that individuals can feel, react and communicate when stressed by illness and how the professional may help manage that stress (Thompson et al, 2003). Research indicates a relationship between attachment style and treatment adherence, health care utilisation, symptom reporting, patient demands on doctors, and consultation rates (Cienchowski et al, 2001; Cienchowski et al, 2002; Tan et al, 2005). Research in this area however, has primarily focussed on patients’ attachment to the physician (Cienchowski et al, 2004).

Summary of work
85% (n=254) 4th year Medical students volunteered to be videoed in a single 10 minute communication skills OSCE with simulated patients. The quality of communication was rated with an International consensus coding scheme (Del Piccolo et al., 2006) that detects and quantifies patient emotional cues/concerns with associated doctor’s responses. Examiner scores on the OSCE were also collected. The majority of participating students (n=236) completed a questionnaire on attachment style.

Analysis
We are in the process of analysing the results. A MANOVA test will analyse the relationship between coded video communication skills scores and (a) OSCE communication skills examiner scores and (b) student attachment style.

Conclusion and future directions
By examining the relationship between examiner marks and video analysis of an OSCE we expect to find support for the OSCE as an effective measure of communication skills. The investigation has reaffirmed the need for current methods of assessing communication skills to be examined and compared to other reliable measures and has added to limited research on medical students’ attachment style and communication skills. It has also highlighted the need to longitudinally examine students’ communication skills outside the simulated setting. This is particularly relevant as assessment of communication skills is largely based on simulated student/patient consultations at the University of Liverpool.

References
Basic Science Education
The Other Side of the Fence: Student-Created Student Assessment

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Background
The ability to problem solve and learn independently are skills all students should possess. Creating exercises to develop and assess such skills are however academically demanding and time intensive. Summer studentships in Medical Education, offered to high calibre senior medical students at the University of Aberdeen, allow students to be involved in the construction of teaching material directed at their junior colleagues while simultaneously reducing the burden on staff.

Aim
To create an assessable problem solving exercise that could be integrated into the medical curriculum and which would test the problem solving and data analysis skills of the student while simultaneously promoting learning in a key subject area without direct staff contact.

What we did
Senior medical students applied for a diverse range of summer projects, one of which was to develop an exercise fitting the criteria described above. The successful student was given guidance on construction of the exercise which in this particular case focused on opioid pharmacology with the aim being that by completion students should understand the molecular basis of opioid mediated analgesia and tolerance.

The summer student spent 8 weeks reading relevant journal articles, identifying suitable figures for inclusion and, with guidance, constructing appropriate questions to lead junior students in future years through the exercise.

Evaluation
The preliminary exercise was initially piloted by the summer student among his peers, refined appropriately and then distributed to 85 third year Biomedical Science students who, as standard, undertake an assessable problem solving exercise within their curriculum.

The product received high praise from science students; 72% rated the exercise positively on a five point Likert Scale. The marks for the exercise were also encouraging; average score fell in the 2.1 category and 27% of students were in the first class bracket.

Conclusions
This project worked exceptionally well, developing critical appraisal skills in the summer student while at the same time easing staff load. It provided an informal setting for the student to share his valuable perceptions on assessment with staff while also providing the opportunity to view assessment from “the other side of the fence”. Successful students must be of a high academic calibre however as the academic challenge in constructing exercises such as this is considerable.
From core concepts to clinical skills in practice: Developing a continuum of education in genetics for medical practitioners

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Medical professionals within the NHS will increasingly meet patients with genetic disorders as genetic advances result in the integration of genetics outside specialist services, although the frequency will depend on their role and specialty. It is therefore important that all medical professionals are equipped to deal confidently with the increasing demand from patients for genetic advice and services. Education in genetics therefore should not be a static event, but may be best seen as beginning with undergraduate education and continuing in professional development and workplace learning.

To meet this challenge, the NHS National Genetics Education and Development Centre has developed an educational framework for genetics across medical training and continuing education. Learning outcomes relevant to clinical practice have been identified across the continuum of medical education, from medical student training through to specialty and general practice training. The learning outcomes for medical students emphasize underlying genetic concepts whereas those for general practice and specialty trainees emphasize the applications of these concepts to clinical practice.

Learning outcomes for each stage were developed using a practice based approach. Knowledge skills and attitudes relevant for each stage of training were identified through a needs analysis of the education needs of medical practitioners at each level. Findings were refined and reviewed through modified Delphi-surveys to achieve consensus of non-genetic specialists and clinical geneticists. These lists of knowledge, skills and attitudes were then developed into learning outcomes, which describe what the undergraduate/trainee can do with what they know. They specify what is to be achieved, but allow individual institutions to adopt their own educational strategy in achieving these. We have conducted five independent needs analysis for medical students, general practice trainees and trainees in dermatology, cardiology and neurology. All groups have identified similar core concepts and skills, implying a common set of knowledge, skills and attitudes required for clinical practice.

Our genetics learning outcomes are being integrated into UK curricula and training programmes, and endorsed by national bodies including the Joint Committee on Medical Genetics.

The continuum of genetics education shows the life-long nature of learning genetics for health professionals. From their initial pre-registration education, during post-graduate training and throughout their working lives, medical practitioners are developing their genetics knowledge and skills relevant to clinical practice. Each stage builds on the foundations already laid, enabling knowledge to be translated into providing high quality care for patients.

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Clinical Skills
The causes of and factors associated with prescribing errors: Systematic Review

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Prescribing errors are common, resulting in adverse events and patient harm. Recommendations on their prevention are often based on surmised rather than empirically collected data. This systematic review aimed to identify all informative published evidence concerning the causes of and factors associated with prescribing errors in specialist and non-specialist hospitals, collate it, analyse it qualitatively, and synthesise conclusions from it.

Seven electronic databases (1985-2008) were searched; bibliographies of included papers were examined for additional citations. To be included, a study had to report empirically collected data on the causes of or factors associated with errors in handwritten prescriptions for in-patients. Non-English publications and studies that evaluated errors for single diseases or routes of administration were excluded.

Seventeen (from 1261 identified) papers, reporting 16 studies, were included. Studies from USA and UK university-affiliated hospitals predominated (10/16, 62%); 7 reported data on the causes of and 9 on the factors associated with prescribing errors. Data on causes were collected after the identification of specific errors, using interviews or observation of interactions between the prescriber and other health care professionals.

Definitions of prescribing errors varied widely. Findings were categorized according to Reason’s model of accident causation\(^1\) into active failures, error-provoking conditions, and latent conditions. The active failure most frequently cited was a mistake due to inadequate knowledge of the drug or the patient. Skills-based slips and memory lapses were also common. Where error-provoking conditions were reported, there was at least one per error, including lack of training or experience, fatigue, stress, high workload for the prescriber and inadequate communication between health-care professionals. Latent conditions included reluctance to question senior colleagues and inadequate provision of training.

Lack of undergraduate clinical pharmacology tuition has been proposed as a ‘likely’ cause of prescribing errors. The findings of this review cast doubt on this suggestion. Prescribing errors are often multifactorial, often with several active failures and error-provoking conditions acting together to cause them. In the face of such complexity, solutions addressing a single cause (such as lack of knowledge) are likely to have only limited benefit. Further rigorous study of the causes of error needs to be conducted, seeking potential ways of reducing error.

Reference


Acknowledgements

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ACRE – Advanced Cardiac Resuscitation Evaluation: A randomised single-blind controlled trial of peer-led vs. expert-led advanced resuscitation training

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Background
Advanced cardiac resuscitation skills training is an important and enjoyable part of medical training, but requires small group instruction to ensure active participation of all students. Increases in student numbers have made this increasingly difficult to achieve. Previous studies have compared basic resuscitation training from experts and peers, but no study has compared advanced cardiac resuscitation training by these groups.

Method
A single-blind randomised controlled trial of peer-led vs. expert-led resuscitation training was performed using a group of sixth-year medical students as peer instructors. The expert instructors were a senior and a middle grade doctor, and a nurse who is an Advanced Life Support (ALS) Instructor. A power calculation for non-inferiority of the performance of the peer-led group indicated that the trial would have a 93% chance of detecting a 20% difference in pass rates between the groups, were one to exist. Secondary outcome measures were the number of High Pass grades in each groups and safety incidents.

The peer instructors designed and delivered their own course material. To ensure safety, the peer-led groups used modified defibrillators that could only deliver low-energy shocks. Assessment was blinded – performed by a doctor (senior/consultant or middle grade) who had not been the expert instructor and was unaware of the students’ training group. Assessment was conducted using an Objective Structured Clinical Evaluation (OSCE). The checklist emphasised patient and staff safety and clinical effectiveness, and was based on International Liaison Committee on Resuscitation (ILCOR) guidelines. The results were analysed using a chi-squared test.

Results
A total of 132 students were randomised: 58 into the expert-led group, 74 into the peer-led group. 57/58 (98%) of students from the expert-led group passed compared to 72/74 (97%) from the peer-led group: this difference was not significant.

High-grade passes were achieved by 64 (49%) of students: 33/58 (57%) from the expert-led group, 31/74 (42%) from the peer-led group – this difference was not significant.

Conclusions
The key elements of advanced cardiac resuscitation can be safely and effectively taught to medical students by peer-instructors.
Out of sight: an innovative approach to teaching internal examinations

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Background
How should we teach digital rectal examination (DRE) and vaginal examination (VE)? These core clinical skills are challenging to teach because they are conducted almost entirely out of sight, with the teacher unable to see what the student is doing. Furthermore, clinicians may be unable to accurately articulate how they perform these examinations, as expert practice is highly automated. Traditional learning through repeated clinical exposure is no longer feasible, as patients are increasingly reluctant to be examined by students. There is a need for a more structured, systematic approach. Cognitive task analysis (CTA) allows an expert’s knowledge to be captured and deconstructed through interview and systematic observation. We describe an innovative combination of observed behaviour and spoken commentary, using a modified physical DRE model within a simulated clinical setting equipped with digital recording technology.

Methods
A ‘cut-away’ benchtop rectal model for CTA was developed, allowing the clinician’s examining finger to be viewed while performing DRE. Clinicians performed each procedure twice; first, interacting with the model as if with a patient in a real clinical encounter, then describing in detail to a researcher the cognitive and physical processes involved. Procedures were recorded using two networked video cameras, one internally-mounted within the model and another externally-mounted on a tripod. Audio-recordings were transcribed verbatim for analysis.

Results
We report a dataset of 20 clinician observations (40 DRE episodes). These included general/colorectal surgery (n=9), gastroenterology (n=4), urology (n=2), and general practice (n=5). The internally and externally-mounted cameras allowed different aspects of the procedure to be viewed simultaneously. Through analysis of the transcripts and video data we have identified the key stages of DRE, the steps within each of those stages and variations in practice according to clinical discipline. Certain steps not accurately articulated by the clinicians were successfully captured by the internally-mounted camera.

Conclusions
We present an innovative process for CTA of DRE. This highlights the value of using video data from an internally-mounted camera positioned within an appropriately designed physical model to supplement spoken commentary. Work is in progress to develop a CTA for VE. These CTA data will form the basis of a new instructional model for DRE and VE, aiding students to perform these hidden examinations systematically. Drawing on work done at the Royal Veterinary College, University of London, these data will inform the design of virtual reality haptic (touch) simulators for the teaching of internal examinations.

References
Clinical communication for international students in the UK undergraduate curriculum

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Background
The GMC emphasises effective communication skills as a fundamental component of good medical practice, however, conversations with colleagues for whom English is not their first language suggested that the needs of this group of medical students in learning complex clinical communication skills may be different from those of native speakers. The aim of this study was to establish whether the training in clinical communication provided by UK medical schools adequately caters for these students.

Methods
An electronic questionnaire was designed aiming to discover international students’ expectations of clinical experience prior to medical school, their experience of medical school clinical communication and whether anything could be improved. Following external review, the questionnaire was circulated to seven medical schools via a link to the Survey-Monkey website on the medical schools’ electronic forums.

Results
151 international students from 6 medical schools completed the questionnaire and response ratings for each question were high. 49% had significant concerns about clinical communication prior to medical school, however, from preconception to present day students showed improvement in perception of aptitude of all areas of clinical communication. Overall 69% felt there was a need to improve the provision of medical school’s clinical communication training specifically for international students and a non-international student buddy system and clinical tutorials were the most popular ideas.

Conclusion
There is still a need to improve the provision of medical school’s clinical communication training specifically for international students which may be achieved by introducing a non-international student buddy system or clinical communication tutorials.
Medical Graduates’ Preparedness for Prescribing. A study involving three different UK medical schools

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Background
A study was carried out to explore variations in the preparedness of medical graduates of three different medical schools. One of the main themes explored was preparedness for prescribing. A UK study evaluating a new final year programme 1 found that PRHOs perceived themselves to be competent in most outcomes identified from The New Doctor but were lacking in areas such as prescribing. Worries about prescribing mistakes for newly qualified doctors may be well founded as adverse drug events are the leading cause of medical injury in hospital, half arising from errors 2. An Australian study highlights international concern over readiness of medical graduates to prescribe 3.

Aim
To explore the extent to which different medical schools prepare their graduates for the workplace.

Method
Multi-method, prospective, cross-sectional study. The primary research sample was drawn from new graduates of three medical schools with differing curricula and cohorts, who were interviewed at the end of their final year, end of their first placement and at the end of their first foundation year (n=60).

Qualitative triangulating data was collected from nearly 100 clinicians (undergraduate tutors, educational supervisors, key managers, members of clinical teams) to provide another perspective on preparedness. Some of these interviews informed a triangulating questionnaire completed by members of clinical teams and pharmacists who work with F1s. Secondary data was examined in the form of a safe prescribing assessment during F1 with Newcastle and Warwick graduates.

Results
Data from the safe prescribing assessment administered by the foundation schools at Newcastle and Warwick showed that 19% of Newcastle and 16% of Warwick graduates passed first time (the test is repeated over the year until they have achieved 100%). Assuming that this is a fair and appropriate test of prescribing at the level of an F1, it highlights a weakness in prescribing. There was a consistent thread, from primary sample data, and from triangulation data, of under-preparedness for prescribing, although confidence, knowledge and ability did improve by the end of the F1 year. Weaknesses were identified both in the pharmacological knowledge underpinning prescribing, and the practical elements of calculating dosage, writing up scripts and drug sheets.

While there was some feeling from triangulating data that F1s were prepared for prescribing, pharmacists did identify severe gaps. Prescribing was also the main area of practice in which errors were reported by respondents, indicating a significant potential risk. Risks were reduced, but not removed, by support from colleagues, with F1s speaking particularly highly about the help received from pharmacists.

Discussion
There is a need to address perceived weaknesses in prescribing by supporting the development of ward-based teaching of prescribing as a skilled procedure which is subject to the time pressures and contingencies of all clinical skills.

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Trainee views on the standard of specialty training: A focus group study

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Background
The Postgraduate Medical Education and Training Board (PMETB) has established generic standards for training which deaneries must measure themselves against. As part of their Quality Management responsibilities, the Northern Deanery commissioned a study to investigate trainee views on the standard of specialty training in relation to seven key themes (patient safety, handover, quality of education, educational supervision, induction, bullying, and trainees in difficulty).

Aim
To explore trainee views on the standard of specialty training in the Northern Deanery.

Method
A series of focus groups were conducted across Trusts in the Northern Deanery in a qualitative, cross-sectional study.

Participants were recruited from across the Northern Deanery and included trainees in both lower (ST1/2) and upper (ST3+) stages from a range of specialties (n=32).

Results
Trainees reported considerable variability across Trusts and specialties in the quality of education, educational supervision, induction, and the quality of handover. Trainees repeatedly raised concerns over the balance between their training needs and meeting service demands, and felt that service provision typically took precedence. Although all trainees had a designated educational supervisor, the standard of educational supervision was dependent on their supervisor's skill, enthusiasm, and availability. When provided, departmental and specialty inductions were regarded as useful, but Trust inductions were perceived as irrelevant 'tick box' exercises.

Patient safety was regarded as generally high, although some trainees identified continually low staffing levels, heavy workloads, and poor access to consultants as detrimental to patient safety. Handover quality varied considerably, from thorough and well-structured handovers with senior input to very poor handovers that compromised patient safety and continuity of care.

Although trainees were aware of the existence of Trust bullying policies, there was uncertainty regarding implementation of the policy and the likely outcomes. Trainees acknowledged differences in the perceptions of bullying behaviour, and voiced particular concerns regarding the potential negative impact of reporting bullying on their career. Similarly, the perceived career implications of identifying themselves as a doctor in difficulty may act as a barrier to seeking help.

Discussion
This study highlighted some important issues that affect the quality of specialty training. Trainees also offered suggestions for improvement. For example, inductions should include clear expectations of the trainee's role, introductions to key people, practical information to help trainees function (e.g. how to make referrals), and useful services (e.g. ID badges, computer accounts).
In 2005 Medical Education in NHS Lanarkshire developed an Acute Emergencies Training day for all Foundation Year One Doctor commencing in the Organisation. Anecdotal evidence seemed to show that many junior trainees found the prospect of being first contact for patients who might be ill or deteriorating in the acute environment a daunting one. This combined with the Resuscitation Council (UK) 2006\(^1\) that 80% of patients who suffer cardiac arrest show deteriorating symptoms up to 4 hours before the event, suggest that a uniform and robust approach to patient assessment is required.

Van Hell et al (2008)\(^2\) suggest that Clinical performance is not influenced so much by pre-clinical knowledge and skills but possibly by cognitive overload, suggesting that this may occur when too much information is being processed. A period of transition to a new environment added to the transition from the role of student to practicing Doctor coupled with the new information required to perform the duties therein could then be argued to affect performance. Kneebone et al (2004)\(^3\) argue that simulation especially in clinical context allows repeated safe practice and can enhance skills in both simple and complex tasks.

The NHS Lanarkshire Medical Education Acute Emergencies Programme seeks to build on the “Recognition and Management of the Sick Patient” also currently running in Lanarkshire for all Year 4 Medical Undergraduates.

The message in the Acute Emergencies Programme is simple and reinforces two to essential points, Call for Help Early, and the use of a structured approach to the assessment of a sick patient which is uniform throughout the organisation and indeed nationally. The A,B,C,D,E approach to patient assessment

The evaluations of the courses have been positive using a Likert scale (1-5) and has shown very positive results in areas such as “usefulness of the course for future work”, and “relevance to individual needs”.

A development that had arisen based on evaluations is the removal of the majority of didactic material in favour of more scenarios and clinical practical skills such as peripheral Intravenous cannulation, arterial blood gas sampling, and 12 lead ECG recording. These clinical practical skills are integrated into the scenarios which are based on the assessment of the sick patient.

An interactive on-line programme has been developed, and replaces the previously used lectures.

We feel that our programme, which seeks to simplify and reinforce previous training, helps students to feel more confident in their abilities and also reinforces the team work necessary to effectively make the transition from student to practitioner, and gives scope for research via reflection by the trainee on how this process is eased by attendance on the course.

References
Implementing a national skills strategy – identifying skills priorities for remote and rural practitioners

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Introduction
The Scottish Clinical Skills Strategy was launched in September 2007 following a two year consultation process. Its main purpose is to support workforce development for NHS Scotland to provide a first-class skilled work force. The strategy has four priority areas:

- The Scottish Clinical Skills Alliance providing a forum for all stakeholders
- The Clinical Skills Managed Educational Network
- The strategic development and management of national specialised units via a Programme Board
- The piloting and evaluation of a mobile skills unit

This paper shares the results of a survey of skills needs for remote and rural healthcare practitioners.

Background
Changes in the delivery of care have impacted on staff education and training needs in relation to skills development, with practitioners taking on new skills practices as part of their new role development within the service. It is essential that in carrying out a skill on a patient, wherever they have accessed it, the health service needs to be assured that it is being practised to the same safe and high standard by the practitioner.

Methods
Between February and May 2008 a questionnaire was sent out to remote and rural healthcare practitioners by the Clinical Skills Managed Educational Network. The questionnaire was structured around open-ended questions about skills needs, but also collected opinion on barriers to skills development. The total sample size was 143; 37 from a questionnaire sent via BASICS to all BASICS members in Scotland and 106 from an on-line survey sent via RRHEAL (Remote and Rural Health Education Alliance), and the SCSN (Scottish Clinical Skills Network) membership. Analysis of the responses was carried out.

Results
The results showed demand for skills education in the following areas:

1. Emergency care adult
2. Emergency care child
3. Emergency maternity
4. Generic skills
5. Communication skills
6. Clinical assessment
7. Patient management
8. Health promotion
9. Cross sector skills
10. Procedural skills

In each of these categories the practitioners had identified key skills for development both technical and non technical.

Conclusion
The results of this survey have been used to inform and develop a programme for the mobile clinical skills unit both in terms of programme development, and identifying venues and logistics for the six month pilot period. Practitioners identified both the need to develop new skills and update themselves on skills. Remote and rural practitioners are often a difficult group to access and using several different organisations which are accessed by this group enabled a representative view of their needs to be gathered. Access to clinical skills education was seen as a major challenge to keeping up-to-date. Of the 10 categories of skills needs identified many linked into national initiatives such as patient safety and Scottish health service priorities.
Evaluation of a Training Programme for Specialty Trainees: in pursuit of excellence

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Background
There is good evidence to indicate that training courses significantly improve “generic” skills of health professionals, such as key communication skills for Oncologists (Fallowfield et al, 2002). The NES Training Development Support Unit (TDSU) is responsible for delivering a Generic Skills Training Programme for Speciality Trainees designed to supplement training in good practice in the workplace setting.

An evaluation of this programme is underway which aims to explore course effectiveness beyond the standard evaluation of delegate’s immediate reaction to the training currently undertaken by the Unit. This new work will examine learning acquired and importantly the impact of the training upon delegates on their return to their own working environment.

Methods and Approach
The evaluation covers all 16 courses run by the TDSU between Nov 08 and Mar 09. Course delegates (Doctors in training) who attend a course during this period will be invited to participate on a voluntary basis.

The range of style and content of each course necessitates a mixed methods approach to collecting and analysing data. An appropriate method will be selected for each, to test the level of impact on the individual according to the Kirkpatrick training evaluation model (1994). Level 1 impact (reaction to training) is examined using an updated pre/post-course evaluation form for all courses, the analysis of which is fed back to the Unit at regular team meetings. Level 2 impact (learning from training) will be tested upon the Problems in Management course using pre/post-course tests of knowledge appropriate to assessing primarily a factual and theoretically-based course. Evidence of a level 3 impact (behaviour/application of learning) will be examined using a detailed training impact survey across all courses. A before/after course measure (utilising attitudinal questionnaires and in-depth one to one interviews) will be undertaken with Breaking Bad News, a skills based course which aims to enhance communication primarily through exercises involving actor-based simulation sessions. Interviews undertaken will be transcribed and thematically analysed.

A report of the evaluation findings in May 09 will include implications and recommendations for course development for the TDSU guiding a procedure that can act as continuous feedback mechanism to improve course content and delivery and hence presenting an opportunity to contribute to maintaining clinical excellence. It will also determine whether further evaluation work is required, e.g. moving beyond self-assessed measures of behavioural impact of training towards more objective (and more challenging) observational measures of performance.

References
Impact of a focussed teaching programme on practical prescribing skills among final year medical students

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Introduction
Practical prescribing is a necessary skill for all junior doctors. The 2001 UK Audit Commission Report ‘A Spoonful of Sugar’ raised significant concerns about the inexperience of junior doctors and the frequency of prescribing errors made by them. We conducted a prospective, case-controlled study among Edinburgh final year medical students to assess current prescribing standards and the impact of a focussed prescribing teaching programme.

Methods
Final year medical students undertaking an 8-week module in general medicine randomly assigned to two teaching hospitals comprised the study group. The intervention group of 30 students underwent a prescribing assessment in week 1 consisting of 6 common medical scenarios requiring drug prescriptions. A blank drug prescribing form (Kardex) and the British National Formulary were provided. A stringent marking scheme was agreed by consensus between medical and pharmacy staff. Students then received a focussed doctor- and pharmacist-led teaching programme including a detailed explanation of the assessment scenarios. A second different prescribing assessment was completed in week 8. As a control group, 16 students from the same year attending another hospital completed the same assessments but received no additional teaching. Finally, the group receiving teaching were asked to rate their confidence in prescribing before and after the module using a scale of 1 (no confidence) to 5 (very confident).

Results
In the group that received directed teaching a significant improvement in overall assessment score was achieved with a reduction in the number of errors per prescription and improvement in documentation of allergies (Table 1). Confidence in prescribing also significantly improved in this group.

<table>
<thead>
<tr>
<th></th>
<th>Assessment 1</th>
<th>Assessment 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Teaching programme (n=30)</td>
<td>Control (n=16)</td>
</tr>
<tr>
<td>Overall score (%)</td>
<td>43.4 (39.3, 47.4)</td>
<td>46.4 (41.1, 51.7)</td>
</tr>
<tr>
<td>Documentation of allergies (%)</td>
<td>30.1 (17.0, 43.2)</td>
<td>42.7 (0, 89.6)</td>
</tr>
<tr>
<td>Mean number errors/prescription</td>
<td>0.52 (0.47, 0.57)</td>
<td>0.39 (0.32, 0.46)</td>
</tr>
<tr>
<td>Prescribing confidence</td>
<td>1.5 (1.26, 1.77)</td>
<td>3.7* (3.49, 3.92)</td>
</tr>
</tbody>
</table>

Table 1: Numbers are mean values with 95% confidence intervals in brackets. *p<0.0001 for assessment 2 vs. assessment 1 for teaching group. †p=0.0008 for assessment 2 vs. assessment 1.

Conclusion
Final year medical students make significant errors in prescribing. However, focussed teaching can improve prescribing ability and confidence. Further research is needed to ascertain if this translates to safer prescribing by junior doctors.
An educational programme for long term conditions: Climbing all the way up the Kirkpatrick hierarchy of evaluation of teaching

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Background
Kirkpatrick’s hierarchy of evaluation of teaching can be summarised as the following four levels: Reaction, Learning, Behaviour change and Outcomes. Usually educational programmes still only appear to evaluate at the first level, in clinical practice it is outcomes that we are trying to achieve.

Aim
To evaluate an innovative locally created clinical education strategy for diabetes care using Kirkpatrick’s hierarchy.

Method
The Alphabet Strategy is a patient-centred, evidence-based strategy based on the most important aspects of diabetes care. It is based on Miller’s key educational idea that most people can only remember around 7 concepts (Miller 1956).

Main Results
Level 1: Reaction
Healthcare professional Education programme
Delivered on over 20 occasions as part of a clinical education programme. Evaluations have been consistently positive.

GAIA Survey (Global Alphabet Strategy Implementation Audit)
Survey in 35 diabetes centres in 25 countries revealed that 57.5% of 146 healthcare professionals felt they were likely to adopt the strategy. 84.5% felt it was evidence-based and 88.0% practical.

Level 2: Knowledge Skills Attitudes acquired
Patient Education Programme
Knowledge of diabetes care was evaluated in 100 patients, which showed a significant improvement from 61.5 % to 80.0% (p<0.01).

i-DREAM Programme (interactive Diabetes Research Evidence Application in Management)
In 100 multi-professional healthcare workers, improvement in clinical management plans, application of evidence-base research and correct prescribing scores (69% before, 98% afterwards (p<0.001)) in 100 clinicians on case studies.

Level 3: Changes in Professional Practice
Diabetes In-patient Care Evaluation
Data was collected on quality of care before and after implementing this strategy (100 patients). There was significant improvement in 9 of the 10 main parameters of care (p<0.05).

ASIAD Study
Implementation in an economically deprived clinical setting in India. Within 4 months there was improvement in the 100 patients studied (p<0.01). Main changes were: improvement in cholesterol profile (60% to 90%), statin use (5% to 38%), aspirin use (6% to 71%), proteinuria assessment (48% to 93%).

Level 4: Patient Outcomes
POEM Clinical Audit (Practice Of Evidence-based Medicine)
Over 5 years BP, Lipid profile, diabetes control, eye and feet screening improved. Cardiovascular risk score improved from 31.2% to 23.7% (p < 0.05). Our strategy has been shown to produce outcomes comparable to UKPDS and Steno-2 intensively treated patients.

Conclusion
This strategy has helped deliver high quality patient education and reduction in cardiovascular risk factors, catering for all 4 levels of Kirkpatrick’s Hierarchy for evaluating an education programme. Such a programme may be applied to other chronic disease states with similar beneficial effects.
Communication Research
Medical trainees use of lifestyle change techniques in the management of obesity

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Background

Obesity, an increasing problem worldwide, is a leading cause of morbidity and mortality. Nearly ¼ of the population of England are obese, and by 2050 this is predicted to reach 60%. This has enormous cost implications for the NHS. Consequently, tackling obesity is a Government priority. Obesity management requires lifestyle (i.e. behavioural) changes. An evidence-base exists of theoretically-informed behaviour change techniques for weight loss, however, in routine practice, doctors more commonly use theoretically-unfounded communication strategies (e.g. information giving). It is not known if the current focus on communication skills teaching during undergraduate medical training adequately prepares future doctors for this growing challenge. Evidence of student self-assessment suggests it does not.

Aims

To examine 1) what behaviour change techniques medical undergraduates use to facilitate lifestyle adjustments in obese patients and 2) how this impacts on patient behavioural intentions.

Methods

Forty-eight students in their clinical years of a UK medical school were recruited to perform two simulated consultations each. Both consultations involved an obese patient scenario where weight loss was indicated (diabetes/surgery waiting-list). SPs were used to standardise patient variables (e.g. barriers to behaviour change) and presentation of scenario order was counterbalanced. Following each consultation, students assessed the techniques they perceived themselves to have used. SPs rated the extent to which they intended to make behavioural changes and explained why. Anonymised transcripts of the audiotaped consultations were coded by independent assessors, blind to student and SP ratings, using a validated behaviour change taxonomy.

Results

Students reported using a wide range of evidence-based techniques. In contrast, codings of observed communication behaviours were more limited. Students focused similarly on facilitating changes in diet and exercise behaviours. SPs behavioural intention also varied and was explained with reference to students’ communication behaviours.

Conclusions

It is suggested that current skills-based communication programmes do not adequately prepare future doctors for the growing task of facilitating weight loss. Findings are discussed in relation to the social cognitive basis of behaviour change and communication training needs for health professionals.

References:

Continuing Education
The development and psychometric evaluation of a safety climate measure for primary care

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Introduction
Improving the quality and safety of patient care through targeted interventions is a healthcare priority in NHS Scotland. Building a safety culture has been identified as an important element in this approach. Measuring safety climate through questionnaire-based methods can contribute significantly to this process. However, existing questionnaires are mostly developed for secondary care settings in North America, while many are thought to lack adequate psychometric development and testing. Our aim was to develop and test an instrument to measure perceptions of safety climate in primary care teams in Scotland.

Method
The instrument development phase was facilitated by a steering group and involved a literature review, written feedback and semi-structured interviews with primary care team members, and combined use of a modified Delphi group and content validity index with a group of experts. The developed instrument was tested in a cross-sectional survey of 49 general practices in the west of Scotland. Data was analysed using recommended statistical methods such as exploratory and confirmatory factor analysis, Cronbach and Raykov reliability coefficients and item statistics.

Results
A content-valid instrument was developed, with 563/667 primary care team members (84%) completing the questionnaire. Five safety climate factors were identified and confirmed through factor analysis: leadership, communication, teamwork, safety systems and workload. Items with strong factor loadings to one factor were retained. Overall instrument reliability coefficients were 0.93 and 0.94 with all safety climate factors >0.8.

Discussion
The questionnaire has been developed and tested using recommended psychometric principles. It is ready for use in primary care settings in NHS Scotland to measure perceptions of safety climate amongst healthcare teams. This has the potential to help prioritize safety and educational interventions. Further research is required to benchmark safety climate scores and link these with identified safety-related outcomes. Elucidation of the acceptability, feasibility and educational impact of the questionnaire is also required.
Independent feedback on clinical audit performance: a multi-professional pilot study

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Introduction
Investigating significant events, undertaking clinical audit and seeking peer feedback are all proposed as objective methods of highlighting potential learning needs. However, the clinical audit evidence base suggests there are a number of obstacles which impede its success - despite its widespread endorsement by policymakers. For many health professionals audit is still a marginal activity with low priority and they may lack adequate knowledge and skills of audit method. Policymakers often assume the opposite is true. The reality is that much audit is poorly designed and frequently fails to be adequately completed. A clinical audit peer feedback model is well established for medical practitioners in the west of Scotland as one approach to improving practice and validating learning and change. Against this background, we aimed to investigate the acceptability and educational impact of independent feedback on the clinical audit performance of different groups of healthcare professionals by trained colleagues.

Method
Pilot study involving review of the criterion audit and significant event analysis (SEA) attempts of west of Scotland dentists, pharmacists, physiotherapists, practice managers and nurse practitioners by trained colleagues using validated instruments. Audit, SEA and feedback reports were content analysed. Data on pre and post study attitudes, experiences and knowledge levels were collected by questionnaire. Differences in mean group scores were calculated, with ≥1.0 judged to indicate perceived educational gain.

Results
34 participants submitted 54 audit and SEA reports, with 20 submitting both (58.9%). 14/20 Audits (75.0%) and 26/34 SEAs (76.5%) contained evidence of appropriate learning needs and action(s) implemented for healthcare improvement. Feedback focused on knowledge and skills in applying audit methods; demonstrating insight into deficiencies; highlighting appropriate learning needs; and implementing change. Audit knowledge and skill scores increased by a mean difference of ≥1.0 for most stages of audit and SEA method. Strong agreement on the value of independent feedback on clinical audit was reported.

Discussion
This small study provides further evidence of the acceptability and impact of independent feedback on clinical audit performance for healthcare professionals. Integrating clinical audit and peer feedback with CPD obligations may facilitate greater engagement and more effective quality improvement, but will require a policy change and additional resource.
Collective learning: a cross-sectional survey of perceptions safety climate amongst the primary care team

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Introduction
Building a safety culture has been identified as an important approach to improving patient safety. Measuring safety climate in secondary care is now an established part of this process. Our aim was to measure the perceptions of safety climate in primary care.

Method
A 30-item questionnaire measuring five safety climate factors: leadership, workload, communication, safety systems and teamwork was developed and psychometrically evaluated, with a 7-point rating scale chosen to enhance discriminant reliability. A cross sectional postal questionnaire survey of a random sample of all directly employed and attached staff groups in general practices in the west of Scotland was undertaken. Item statistics and subgroup analysis (ANOVA) were performed.

Results
A total of 49 practices participated with 563/667 completing and returning questionnaires (84%). Overall perceptions of safety climate were positive with a mean score of 5.48 (0.78), but varied significantly between some practices and professional groups. The ‘leadership’ factor had the highest mean score of 6.14 (0.87) and ‘workload’ the lowest with 5.02 (1.19). Similar perceptions of overall safety climate and safety climate factors were found when the data was analysed according to gender, work experience, work pattern and practice size. Perceptions in non-training practices were more positive for the ‘communication’ (P=0.001) and ‘teamwork’ (P = 0.005) factors than in training practices. Differences in perceptions were found between ‘management’ and ‘staff’ groups, with management significantly more positive (P<0.001).

Discussion
Measuring safety climate in primary care may facilitate collective learning by helping individual practice teams to prioritise their learning needs according to their safety factor scores. Perceptions of management and staff may have to be aligned to assure their effective team working before it becomes possible to build a sustainable safety culture. At an organisational level safety climate scores may assist in the development of educational packages and tailored support to specific practices. Future research might help to benchmark safety climate data and utilise serial measurement to evaluate educational input.
Do medical graduates need more on-the-job experience? A prospective qualitative study comparing three diverse UK medical schools

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Introduction
Goldacre et al\(^1\) reported in 2003 that over 40% of UK medical graduates did not feel prepared for their first medical job. He reported large differences in preparedness between graduates of different schools. A more recent survey showed that preparedness had increased yet there was still wide variation\(^2\).

Aim
To examine medical graduate preparedness for practice.

Methods
The study compared the experiences and perceptions of graduates, tutors, educational supervisors and members of the clinical team. Three different types of medical school were compared: Newcastle - systems-based, Glasgow - problem-based learning and Warwick medical school – graduate entry. A primary sample of 60 medical graduates (20 from each medical school) were selected and interviewed at three time points: at the end of medical school and after 4 and 12 months as a foundation doctor. Triangulating data was collected from interviews with 92 clinicians over the three sites. In total over 250 qualitative interviews were conducted. The theoretical approach adopted was grounded theory\(^3\), an iterative approach which aims to develop theory from the data.

Results
Analysis identified that themes regarding preparedness included: communication skills, history taking, clinical and practical skills, team working and anatomy. Areas of lack of preparedness included ward work, dealing with paperwork, management of acute patients, prioritising patients and time management, working on-call and prescribing. Exposure to clinical practice was identified as the core theme underlying preparedness. This led to the theory that preparedness for practice increases with exposure to clinical practice.

Although selected for being diverse, we did not find a difference between medical schools as all three schools provided a similar amount of exposure to clinical practice. The results suggest that it was not the type of curriculum or cohort that influenced preparedness but the amount and particularly the quality of clinical practice.

Discussion
We relate our findings to the theory of Lave and Wenger\(^4\) on situated learning and legitimate peripheral participation. Preparedness for practice increases with enculturation into real practices and authentic activity. The novice student is initially ‘peripheral’ but with increasing skill, particularly in the final year (with increased competence and skill), needs to move more to the ‘centre’. This would involve the final year student having a clear role and becoming part of the team and undertaking legitimate practices and in so doing becoming more prepared for practice.

References
A little bit of magic? The place of professional networking in delivering excellent health and social care

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Background
At a time of unprecedented demand on UK health and social services¹ the need for workforce support and development was never more urgent. This is particularly true of middle NHS management which is recognised as a neglected group in terms of education and support² Professional networking offers one potential solution. In Scotland the Managers Development Network (MDN) was established in 2006, as a result of a partnership between NHS Education for Scotland (NES) and the Institute of Healthcare Management Scotland (IHM). The aim was to facilitate 'joined up' management through providing junior, middle and Practice Managers across NHS Scotland with networking, training and development opportunities e.g. events, master classes, continuing professional development (CPD), and networking experience. The network is open to all managers across Scotland, is not restricted to IHM members, and has the support of NHS Board Chief Executives and Chairs. NES funds the initiative which is being piloted through IHM over a 3-year period (April 2007-March 2010). This paper presents results of evaluation of the network's first 18 month period.

Aims:
• To explore the potential value of professional networking as a support and educational tool
• To present participants’ feedback on the specific advantages of the MDN in contributing to excellent service delivery

Methods:
Data collection:
• Digitally recorded semi-structured telephone interviews
Participants: MDN users, leads, facilitators and other key stakeholders (N=110)
Settings: Health, social care and wider employment sectors across Scotland
Data processing/analysis:
• Intelligent verbatim transcription of recorded interviews
• Analysis with the aid of NVivo software

Results: Preliminary results suggest that:
• MDN users see the network as providing vital management support for senior, middle and new managers, and clinicians, across professional boundaries, and with colleagues in local authorities and the voluntary sector
• Users appreciate the 'bite sized' learning delivered by quality speakers in informal environments, afforded by MDN events in local localities, at flexible times
• Senior managers and MDN leads tend to prioritise networking opportunities over actual events
• NHS Organisational Development (OD) leads see the MDN as providing valuable educational motivation which is sometimes less apparent within mandatory CPD programmes

Conclusions: Innovative professional networks such as the MDN can help deliver vital educational and professional support, at low cost, to increasingly constrained public and voluntary services. The future skills of managers within a changing health and social care policy climate may, increasingly depend on such 'joined up' approaches.

References:
Supporting an ageing workforce in continued pursuit of excellence: pilot research in South East Scotland

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Background
Health service recruitment and retention crises, linked to demographic change¹, could present potential risks to patient safety through, for example, understaffing and inexperience. Enabling older NHS employees to maximize their full potential is one potential solution. This NES and Scottish Government funded research derives from local partnership alliance². It explores the scope for engaging older NHS employees (existing and new), including capitalizing on their expertise, motivating their ongoing learning and development and identifying their main support and training needs. It presents real opportunities to contribute to maintaining clinical excellence through strengthening the educational infrastructure, training, and support, relating to this employment group.

Aims
• To explore the ‘career stories’ (career pathways, experiences and plans) of older NHS employees
• To identify specific initiatives relating to older NHS employees for development by local service partners
• To inform partners (NHS and other key stakeholders) of the main perceived areas for improvement

Methods
Data collection: Digitally recorded telephone interviews (semi-structured and/or in-depth) with older NHS employees (N=155) regarding their views and experiences of working in the NHS and suggested training and support needs.

Participants:
• Doctors (GPs and hospital); Nurses (registered and non-registered/acute and community); Allied Health Professionals (AHPs); Administrative and Clerical and Support staff
• Two age cohorts (45-55; 55+)
• All grades

Settings: SE Scottish Health Board areas (Fife, Borders, and Lothian)

Data processing and analysis: Recordings were uploaded securely to a digital agency for 'intelligent verbatim' transcription prior to analysis with the aid of NVivo qualitative analysis software.

Preliminary results:
• Increased workload intensity, as much as age per se, affects employees' capacity to deliver excellent health care
• The need to feel valued at work remains paramount to optimal engagement
• The extent to which age is perceived as a factor in performance is variable depending on specific profession and individual experience
• Potential solutions to age related problems at work are equally variable and include e.g. educational initiatives, support networks, changes of policy, post retirement schemes, and improved occupational health services
• There is a general lack of expectation of any specific measures to assist or enable older employees to function more effectively at work

Conclusions
Maintenance of excellent health care hinges on valuing and supporting an increasingly aging workforce. Evidence from South East Scotland suggests a lack of such supports. Current efficiency drives can exert excessive pressures on staff and may be counterproductive.

References
Curriculum Planning
Stalled at a fork in the road – the teaching of professionalism in undergraduate medical education

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Background
Professionalism as an outcome is firmly established in formal undergraduate medical curricula\(^1\). However, there is no consensus on how professionalism should be taught\(^2\) and there appears to be a dichotomy between teaching it through integration into the curriculum or through parallel methods adjacent to the rest of the formal curriculum. Hence the analogy of professionalism teaching being stalled at a fork in the road, unsure which route to take, or even whether there is a middle route available. Meanwhile the powerful influences of the hidden professionalism curriculum and the professionalism curriculum in action appear to create dissonances in learning about professionalism\(^3\). We wanted to test the validity of this background.

Objectives
To carry out a literature review comparing integrated and parallel teaching methods of professionalism; to ask 5th year medical students about their perceptions and experiences of learning about professionalism.

Methods
The keywords teaching or education or medical and professional role or professionalism were used to search Medline, Embase, Cochrane Database of Systematic Reviews, ACP Journal Club EBM reviews and 12 further databases.

Three focus groups of final year students were conducted with two groups of the same gender and one group of both genders; n=17 in total.

Results
The literature did not reveal good quality Level 1 or Level 2 evidence relevant to the question of the effectiveness of the methods for teaching professionalism. Obtaining such evidence is however problematical since the appropriate outcomes to measure have not been defined\(^2\). The focus groups identified the powerful influences from integrated teaching of professionalism including organised exposure to longitudinal case studies, role models and clinical experiences. Non-integrated or isolated events like professional awareness days and artificial environments were perceived to have low value.

Conclusions
We conclude that professionalism teaching is stalled at a fork in the road which leaves learners and teachers frustrated and prey to idiosyncratic influences from the hidden curriculum and the curriculum in action. Options to move forward include a consensus approach similar to the recent consensus about communication curricula\(^4\) with peer pressure between medical schools reducing dissonances in learning about professionalism. It seems likely that any consensus would be based on integration rather than parallel teaching and it is hard to justify a middle route. Another option would be for the General Medical Council to be more interventionist but the independence of the medical schools to define their own curricula would then be compromised.

References
Community Based Medical Education (CBME): Integrating Professionalism and Health Promotion

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Background
In response to the need to educate future medical workforce about professionalism and health promotion, we have implemented an integrated educational program on Community Based Practice for second year medical students at Monash University. This presentation will focus on the processes utilised to bring about change and the implications of such change within a medical curriculum.

Methods
Given that both the Community Partnerships and Health Promotion programs were independently delivered since 2003, the evolving forum involving students, community based field educators and faculty explored the importance of our mutual interests in improving the health of the community while enhancing the knowledge and skill of second year medical students. Through a process of community engagement, student feedback from anonymous evaluations, accreditation requirements, and curriculum objectives we recognised that there was a need to bring about change in the educational processes. These joint efforts lead to the development of the Community Based Practice (CBP) Program in 2008.

Results
As a result of the implementation of the CBP program in 2008, 305 students, 18 academic advisors and 120 field educators participated on the development of key competencies during the Community Based Practice Program such as communication, relationships building, facilitation, negotiation, partnerships, research and evidenced-based practice within the community in promoting health. Consequently, 114 health promotion projects were either developed or implemented or evaluated for the community by teams of second year medical students.

Conclusion
The Community Based Practice Program is a prototype which recognises the community and its health professionals as an educational platform in medical education. The community offers our students a wealth of teaching and learning opportunities in professionalism and health promotion leading to a better understanding of the roles of health professionals, community resources and gaps for various health care needs.
Towards a core Māori health curriculum for undergraduate health professional programmes

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Abstract
Population health status in New Zealand is characterised by stark ethnic inequalities, with Māori (the indigenous population) experiencing significantly poorer health on average than non-Māori. Reducing social inequalities has become a major feature of public policy, including an emphasis on reducing inequalities in health. Health professional education programmes must ensure that their graduates can contribute to improving Māori health and promote equitable outcomes for patients, communities and populations.

This paper describes a common approach to Māori health curriculum development across the four major undergraduate health programmes (Medicine, Nursing, Pharmacy and Health Sciences) at the University of Auckland, New Zealand. Drawing on the principles of outcome-based education, we employed a range of methods to inform the development of a core Māori health graduate profile, with input from each of the programmes’ academic leaders. As a result, high-level support has been obtained for a common set of Māori health graduate learning outcomes and domains within the undergraduate health curricula.

The four broad domains for Māori health teaching and learning are: (1) Indigenous issues, which includes indigenous rights and an introduction to ‘the Māori world’; (2) Population health, which focuses on measuring Māori health, health inequalities and the determinants of inequality; (3) Quality and safety, which covers cultural competence, self-reflection and understanding racism, and; (4) Professional practice, which emphasises effective communication, audit and lifelong learning. Core learning outcomes include the ability to engage appropriately in interactions with Māori individuals, families and communities, to explain how ethnic inequalities in health are created and maintained (and how they may be reduced and eliminated), and to critically reflect on one’s own practice.

The graduate profile will be used to map existing curricula and as the framework for a more systematic approach to Māori health teaching, learning and assessment. This will assist in making curricula more comprehensive, evidence-based and transparent for both staff and students. It will also provide greater opportunities for interprofessional learning and for sharing of insights and knowledge across programmes. In this paper we will outline progress towards implementation of the graduate profile and foreshadow some of the key challenges that lie ahead. Principles and practical insights from our experience are broadly applicable to the challenging area of cultural competence teaching and learning in medical education.
Effective Feedback
Exploring the provision of effective feedback to undergraduate medical students

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Data from the 2008 National Student Survey Questionnaire suggested medical students perceive deficiencies in the feedback they receive on their learning and assessments. This is a potentially significant finding, since we are told that effective feedback on performance is a major element contributing to the effective progression of learning and ultimately educational success\textsuperscript{1,2,3}. We know from experience that giving and receiving feedback is not easy, yet in the literature on feedback in medical education, there have been little or no evidence based explanations for the reasons behind the challenges faced by students and tutors during feedback conversations\textsuperscript{4}.

Between 2006-8 we collected 57 video-recordings of year 3 and 4 medical student case presentations across three sites (see Table 1 below). These sessions involve verbal feedback from clinical tutors in a wide range of specialities. We ask What constitutes verbal feedback in these sessions? To answer this question we are currently building a collection of instances from the recordings and transcripts of feedback sequences using conversation analysis, a well-established empirical approach, which investigates the social organisation of conversation. The focus is on the organisation of turn-taking and how it is built to avoid errors, violations and troubles, and the analysis of action sequences\textsuperscript{5}. We will be closely examining feedback sequences for any patterning in terms of:

A what comes prior to the turns containing feedback
B the design of the turns in which feedback is delivered and
C the response/or lack of response

Patterns in feedback sequences will then be compared against the various models of ‘how to give effective feedback’ that populate the medical education literature\textsuperscript{2,6,7,8}. Once this has been done we will be in a better position to critique actual practice, describe best practice and more empirically grounded strategies.

Nicol and Macfarlane-Dick have argued that unlike the now well established moves to reconceptualise learning from a constructivist perspective, ‘giving feedback’ is still conceptualised via a simplistic model of tutor-initiated ‘information transmission’\textsuperscript{9}. However, it is likely that students are actively engaged in constructing and displaying their understanding of feedback-related turns at talk and may also be initiating feedback sequences themselves. It therefore makes sense to examine actual clinician-student feedback sequences in detail rather than code and count what we intuitively recognise as isolated instances of tutor ‘feedback delivery’\textsuperscript{10}. Only then can we truly explore the challenges faced by medical students and tutors at an interactional level.

References

First year experience
The Big Fish, Little Pond Effect – does it apply in medical schools?

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The Big Fish Little Pond Effect (BFLPE) was first described in 1966 and has been the subject of researched ever since. While well known in the gifted and talented program literature it has not been discussed in relation to medical or other health professional courses.

BFLPE describes the effect of group academically elite students into a single class or school. While some students do exceptionally well, the performance of others deteriorates. Research by Herb Marsh and others has demonstrated that students rate themselves academically by comparison to others. To suddenly find themselves at the bottom end of a class significantly impairs their academic self concept and performance. This presentation will present anecdotal evidence that a similar effect occurs in medical students. There is also evidence that it occurs in any course where the students are all academically elite. The effect has also been described when groups of elite athletes are formed.

The question for discussion is how can we research BFLPE in medical students?

All research to now has compared elite students in “normal” settings with elite students in special settings. Obviously this will not be possible with a medical student cohort. A longitudinal study may show a change but attribution is difficult. We have also considered a control group outside medicine such as elite students in science and nursing.

The presentation and discussion will explore options.

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Innovation and Change
Responding to the challenge of innovating in medical education – the “7 – I” model

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Changes in medical education have not kept pace with changes in the practice of medicine. The surgical operating theatre, for example, has been revolutionised in the last century but, until recent years, the classroom and teaching in the clinical context have remained relatively unchanged. In response to a variety of pressures and facilitated by the use of new learning technologies, we can look forward now to new opportunities.

The challenge today is to apply learning technologies not only to support “sustaining innovations” in medical education where we have modest incremental changes achieving more efficiently and effectively what we are already doing at present, but to harness the technologies through “disruptive innovations” to bring about a paradigm shift in medical education.

Disruptive innovations, however, challenge many incumbents in positions with responsibility but who lack the necessary peripheral vision. If the innovations are to succeed they will require involvement of all the stakeholders and, importantly, an understanding of the innovation process. Developed from innovation theory and evidence-based experience, a model for innovation is proposed – the “7-I” model. In it the success of the innovation is a function of the nature and quality of the innovation, a demonstration of the improvements that will follow as a result of the innovation and the manner in which the innovation is implemented.

\[
\text{Innovation success} = \text{Idea generated} \times \text{Improvement demonstrable} \times \text{Implementation planned}
\]

As shown by the multiplication sign, all the components are required - a “0” for any indicating an innovation that will almost certainly fail.

Essential for each of these elements, however, and often the missing ingredient, is a fifth “I” - Information. A new approach to remedying this deficiency is proposed based on an international network through which teachers in the health care professions can share ideas, experiences and expertise in the field of medical education. This takes account of a further two increasingly important elements in innovation in medical education – International dimensions and Individualisation or customisation.
International Medical Education
Showcasing safety research: an online, case-based approach


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Objective
To develop a series of case-studies on published research to increase awareness of patient safety, illustrate key research methods and encourage researchers and healthcare practitioners worldwide to pursue patient safety research.

Methods
As part of the ‘Research for Patient Safety’ work-stream of the WHO World Alliance for Patient Safety, a core team devised a series of case-studies based on classic research studies in patient safety. The goals were to expose learners to highly functioning multidisciplinary research teams and key research tools to stimulate further high quality research in this field.

Studies were selected using PSNet (knowledge management resource supported by the Agency for Healthcare Research and Quality) and a quota sample was applied across the different WHO regions, with distribution across key research areas in patient safety, level of research (primary or secondary) and study type.

Core information on background, aims, methods, findings and conclusions was extracted directly from published studies and incorporated into PowerPoint presentations using a standardised ‘case-study’ format. To enliven the presentations, the lead researcher of each study was invited to provide a personal account of the study, including motivations, challenges and advice for future researchers.

Results
A total of 18 case-studies have been developed from the journal articles and incorporating information provided directly by the lead authors. 4 studies focus on ‘measuring harm’; 4 on ‘understanding causes’; 5 on ‘developing solutions’; 3 on ‘evaluating impact’ and 1 on ‘translating evidence into safer care’. 14 studies were primary research.

The series is readily navigable including an overview, internal links to specific sections and links to the articles themselves. The cases represent work from 10 different countries across both the developed and developing world and copyright permissions are being requested ahead of planned dissemination through the WHO website, making them freely available.

As part of initial evaluation, the series was discussed at a focus group with 20 international experts in patient safety (Competencies Consensus Conference, December 2008) and feedback was positive. Once the series goes live, online surveys will be set up as part of ongoing evaluation to inform refinements.

Conclusions
This work is a first-attempt to showcase exemplary patient safety research studies in a bid to encourage research worldwide in the field of patient safety by providing an online resource free at the point-of-use. Future steps include enhancing interactivity and multimedia elements of the case-studies; sourcing additional studies from the developing world and translating the case-studies into other languages for wider dissemination.
Medicine in Malawi, a new approach to electives

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An ‘elective’ period is traditional at UK medical schools and for many this is a highlight of their degree. Each year 40% visit a developing country for around 6-8 weeks, representing approximately 500 years of student ‘resource’ from the UK alone. However, lack of preparation surrounding unfamiliar diseases and local procedures as well as limited cultural awareness may limit the benefits from this time abroad.

The Medicine in Malawi Programme, founded by University of Dundee and funded by the Scottish Government has established a partnership between Dundee and Blantyre Medical Schools and Kamuzu Central Hospital in Lilongwe. The first group of senior students travelled to Malawi in July 2008 for extended (four month) rolling placements as part of their final year. The requirements for participation were a month’s SSC or previous experience of international health, satisfactory academic performance and commitment to contribute to the host hospital. The seven selected students were then required to partake in preparation sessions concerning diseases common in Malawi and the cultural differences as well as raise £500 each.

Having been on the programme I will present the student perspective on the extent to which the scheme achieved its published aims. Positives include the confidence and skills to manage patients presenting severely unwell and with previously unseen diseases (neither available in the UK). The use of clinical skills to diagnose and clinically manage with limited resources and carrying out procedures not available to students in the UK were invaluable. For instance we averaged over 10 lumbar punctures each. Also, we sought to contribute to the hospital in other ways. As a knowledgeable pair of extra hands which, once established, could manage patients with minimal supervision and contribute on ward rounds. Our presence contributed to the education of local students through presentations and ward teaching as well as carrying out clinical audits. The programme itself contributed financially to the hospital via fundraising. Following groups will be able to benefit both themselves and the hospital further as the programme becomes more established and well defined through a strengthening partnership.

Challenges include, widely differing health beliefs, risk of infectious diseases, poor study facilities and variable teaching opportunities.

This elective programme has shifted away from the traditional medical elective contributing co-ordination and continuity to the ad hoc nature of current medical electives benefiting both students and host hospitals alike.
Learning diagnosis and treatment planning in dentistry using an interactive virtual patient

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In dentistry, the use of the phantom head (a simulated patient head with removable teeth) has been used for students to learn and practise clinical skills for many years. However, with few exceptions, there has been no use of electronic virtual patients (VP)\(^1\)\(^-\)\(^3\). We describe and demonstrate an electronic virtual patient specifically designed for final year undergraduate dental students to learn and practise diagnosis and treatment planning.

For students, mastering these experiential skills is a learning journey, whilst for the school it is difficult to teach a whole cohort for the following reasons. Firstly, learning relies on every student having exposure to ‘enough’ patients with a breadth and complexity of dental problems. Secondly, ‘enough’ is different for individual students because they learn these skills at different rates.

A video of a consented patient with real complex dental problems starts this 1 – 1.5 hour exercise. When the student starts the consultation appropriately the patient explains why s/he is presenting. Students interact with the patient by typing questions, opening windows from tabs and dropdown menus, and there is a space for the student to make patient notes. Following an examination, the student must make a series of decisions as to how to proceed throughout the exercise. Results of tests and X-rays are provided in windows when requested. A diagnosis and plan of treatment is formulated which can be followed through with attendant consequences.

Students’ examinations, diagnoses and treatment plans are assessed by a ‘traffic light’ system of red for not acceptable, amber for safe, acceptable but not best practice and green for best practice. Students will work through each VP and on completion of the whole exercise be awarded a series of red, amber and green lights. Students will be expected to repeat the exercise until they reach a satisfactory level. Although the VP is a formative assessment, academic tutors will have access to their students’ performance, and student reflection on performance will feed into a summative Personal and Professional Development module. Five VPs are currently under development and evaluation by newly qualified dentists (F1 and F2).

This is an innovative tool which can expose every final year student to a variety of complex cases. It also allows those who find diagnosis and treatment planning difficult to improve in their own time through an iterative learning process.

References


Management / Administration
From policy to practice: Exploring concepts of leadership and followership in interprofessional teams

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Introduction/background

The role of good teamwork in the provision of quality health care is widely acknowledged. Weaknesses in teamwork, particularly perceived inability of multiprofessional healthcare team members to work together, are viewed as an impediment to effective health care provision. Health professional training increasingly recognises developing team membership capabilities as a core outcome and include leadership development in undergraduate and postgraduate curricula, acknowledging that the capacity to lead health care teams appropriately is an important professional attribute.

Recent UK policy documents and the Medical Leadership Competency Framework (re)emphasise the role of doctors as leaders of healthcare teams. Distributed and transformational leadership models are becoming more common in healthcare, reflecting a shift from transactional leadership. However, other policy documents across public sector integrated services (taking a wider focus than healthcare/clinical teams) focus on broader models of distributed leadership, servant and collaborative leadership. This policy misalignment potentially raises issues and questions at inter-personal and team levels concerning the roles of different health and care professionals working within interprofessional teams; professional identity; who leads teams, and what form that leadership might take.

We report on a New Zealand study into leadership and followership in which we interviewed and surveyed hospital based second year resident medical officers and nurses two years from graduation. Interview responses identified a range of issues related to professional identity and belief formation, experiences of providing health care and working with other healthcare professionals. The follow up survey explored the nature of leadership and followership. Leadership literature reminds us that effective leaders need followers. However, no-one leads all the time and followers (especially professionals) are rarely passive. Kelley's concepts of ‘little leaders’ and ‘active followers’ may provide a means of applying leadership theory to practice, and can help challenge potentially confusing assumptions about who might lead and who might follow in healthcare teams. Such assumptions may result in overt conflict, tacit followership or subversion and lead to negative impacts on patient care.

This paper explores some of the issues identified from policy analysis and the study, including individuals’ conception of roles and how leadership and followership approaches might affect team working and performance. We consider implications for education providers and educators around teaching, learning, assessment and practice and suggest that training healthcare professionals to learn the skills of followership alongside leadership might be one useful approach to improve team working.

References

Partnership working in the delivery of careers support within medicine

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The provision of rigorous and reliable careers advice and guidance was one of the key elements of the MMC reforms. However, national recommendations on who should be delivering this careers service or what the content of the service should be have not yet been developed. National networks of careers support providers within medicine such as the National Education Advisers Forum or the Medical Careers Advisors Network indicate that different models of delivery have been adopted including the use of commercial careers support providers or employing qualified careers advisers to set up a deanery based service. This paper describes the advantages of establishing a close working partnership between a university careers service and a deanery careers unit.

The University of London Careers service is the largest service in the UK employing over 42 careers advisers. A small subset of this group have developed specialist knowledge of careers support within medicine through working with undergraduates in a number of London medical schools and staffing the BMA careers counselling service. In 2008 London Deanery established a careers unit headed up by an Associate Dean, together with a part-time chartered psychologist and a close working partnership between this new unit and the university careers service has been developed. With reference to two specific examples of joint working (devising a career development workshop for SASG doctors and producing a substantial electronic resource on careers beyond clinical practice) some of the specific advantages of this partnership will be highlighted.

The argument will be made that a university careers service provides highly qualified careers professionals working within a quality assured national framework. In addition, university careers advisers bring expertise in working with clients across the whole occupational spectrum so they are able to introduce training innovations that have been tried and tested in occupations beyond medicine. However, with reference to the two specific examples it will be suggested that the deanery based careers team also make a significant contribution in terms of ‘fine tuning’ generic careers support to the specific culture that operates within medicine as well as ensuring that in the rapidly changing context of specialty recruitment all careers information is up-to-date and accurate. Thus it will be concluded that one way of providing a professional, quality assured career support service tailored to the specific needs of medical students and junior doctors is for deaneries to form close working partnerships with their local university careers services.
Background
The role of women in medical leadership is becoming increasingly topical. The evidence suggests that the number of males applying to medical school is decreasing compared to the current intake of females which is as much as 60%\(^1\). This influx of females into the medical profession has brought concerns to some, including Professor Carol Black who feels the medical profession is at “danger of losing its power and influence because too many women are scaling its ranks”\(^3\).

Although there are an increased number of females studying medicine, the evidence shows that the number of women in senior positions is still low\(^4\). Women are being influenced by long working hours and the degree of work-life balance when it comes to deciding which specialty to pursue\(^5\). The number of women in General Practice has significantly increased compared to surgery, which has only 7% of women in the speciality\(^5\). It has also been reported that the number of women holding positions of leadership is as low as 5.1% of the total numbers compared to 14.6% in males\(^5\).

There have been suggestions for this discrepancy in the medical profession, which include career flexibility, family responsibilities, lack of research opportunity, the success of females as leaders and more. In order to understand the reason for these issues, we investigated the views of women in positions of senior medical leadership and also undergraduates studying at Medicine at Liverpool University.

Summary of Research
Phase one involved completion of a questionnaire by Liverpool medical school undergraduates. This was to assess their understanding of good leadership, how they perceive themselves, and also whether their views on leadership may be related to gender bias. The study was influenced by the recent guidelines ‘Medical Leadership Competentcy Framework’ published by the NHS Institute for Innovation and Improvement\(^6\).

Phase two took the form of six semi-structured interviews with women in senior leadership roles in the medical profession. The questions assessed their perception of good leadership, the barriers they faced and whether they had faced gender discrimination in reaching their leadership potential.

Summary of Result/Conclusion
The results will demonstrate whether there is a gender difference in views on medical leadership and also reveal the possible obstacles which females have to tackle in order to reach leadership positons. This may ultimately contribute to further work to explore breaking down the barriers which may be preventing women from progressing.

References
Clinical educational effort, how can it be documented and recognised by leaders and peers?

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Introduction
Clinical postgraduate medical education is mainly provided by medical specialists. Their educational effort has increased with the pursuit for excellence in medical education and new initiatives in the specialist training programme in Denmark. However, in association to productivity measurements of service and research the educational effort is less measured and documented, and thereby less recognised by both leaders and peers. In order to enhance visibility of the educational effort in hospitals, our aim was to explore the clinical educational effort of medical specialists from two different perspectives: the medical leaders who assess the educational effort, and the medical specialists who provide the clinical education.

Methods
Two qualitative methods were utilised to explore the perspectives of medical leaders and specialists. First semi-structured interviews were performed with 12 medical leaders; head of dep., head of a centre, or hospital medical director. The interviews were transcribed verbatim; saturation was reached with 8 informants. Secondly four Nominal Group Processes(1) were performed among 24 medical specialists. Participants were purposely sampled from medicine, surgery, psychiatry and paraclinics in county and university hospitals, in different parts of Denmark. All four groups had convergent results, suggesting good reliability. A comparison of the two data sets was performed after the data were analysed inductively. The two sets of data were employed in a content analysis performed by the author and were validated by co-authors.

Results
The data showed substantial accordance between the medical leaders’ and specialists’ perspectives concerning educational effort. The perspectives are illustrated in the development of twelve indicators of educational effort. Five structural indicators documented the organisational elements of educational workload in a department. Four process indicators documented the skill based elements of educational effort in the department. Three result indicators documented the socially based elements of educational workload of medical specialists.

Conclusion and discussion
The combined perspective of medical leaders and medical specialists on clinical educational effort may establish a frame of reference for documenting the educational effort in clinical departments. The perspective is illustrated by twelve indicators of educational effort in clinical postgraduate education. The indicators are measurable and thus visible in the department, and they may enhance the recognition of the educational effort from leaders and peers. Further studies should be applied in order to test the feasibility and acceptability in a clinical setting, when implementing the indicators in hospital departments.

Reference
Tailored feedback for struggling undergraduate medical students

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Medical schools have an ethical and moral duty to support students who are struggling academically. The challenge is how to effectively support students, having recognised them and diagnosed their problem. At the Peninsula Medical School, our assessment strategy provides continuous feedback and support for student learning. An academic group meets three times a year to review the performance and progress of all students, and any struggling students (based on current performance and historical patterns of performance that predict low achievement) are referred to a remediation team (RT) comprised of academics with strong inter-personal skills and a clinical background. The RT has developed a ‘successful learning strategies model’ to help all students, and they interview students who struggle academically, helping them identify areas where they are having problems and providing tailored feedback.

Each student is interviewed by two members of the RT. The interview lasts 1.5 hours, focussing on personal and health issues, how the student manages their learning, their approach to assessment, and any impairment that might affect performance. Highlighting areas where a student might change is obviously fundamental, as is ensuring any change becomes permanent and “the way they do things”.

The team has incorporated two theoretical strands (from business and executive coaching): motivational interviewing and appreciative coaching. Motivational interviewing is both student-centred and semi-directive. It is based on four principles: expressing empathy; developing a discrepancy between current behaviour and expressed goals; “rolling with resistance” – recognising and accepting reluctance to change; and supporting self-efficacy, the ability of the student to do what they say they will do. Appreciative coaching builds on the theories of appreciative inquiry, using positive questions, mindfulness, and other tools to acknowledge the students’ strengths. This enables them to explore how the student has been successful in any area of life, helping them translate this to their own way of learning. For example, exploring his successful mountaineering strategies with a struggling student helped him see how he could apply his mountaineering success to learning.

The effectiveness of the remediation programme is being analysed. Early results show >80% of students either increasing their examination grades or at least remaining in the same grade band following remediation (n=250). Anecdotal feedback suggests that many students develop a new passion and interest in medicine following the interview “When I was really struggling and getting very down about my results the interview was an invaluable source of advice and support”.

When I was really struggling and getting very down about my results the interview was an invaluable source of advice and support.
Multi-professional Education
Non-Medical Members of the Primary Healthcare Team – what are their perceptions and experiences of Protected Learning Time?

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Introduction
Protected Learning Time (PLT) was introduced in Scotland in 1999. This resource for learning has spread throughout Scotland and is used by the majority of community health partnerships (CHPs). On-call clinical teams provide service cover on mid-week afternoons, allowing protected time to primary healthcare teams (PHCTs) so that they can learn together, in order to improve patient care. PHCTs have approximately six afternoons of PLT per year. Most sessions are practice-based with some larger meetings at which the whole CHP is invited. Inter-professional and multi-professional learning are encouraged.

A survey in 2004 showed that general practitioners (GPs) and practice nurses valued PLT highly. In contrast, administrative and clerical staff, practice managers and the community nursing team valued the resource much less. To understand why this was, qualitative research methods were used to understand the perceptions and experiences of those staff groups less satisfied with PLT.

Method
A grounded theory approach was adopted and 12 focus groups were held from 2005 to 2007, as well as seven in-depth interviews. These were audio-recorded and transcribed. Data analysis followed the grounded theory method; codes were generated and combined into categories. Memos were written and added to the depth of analysis.

Findings
Three categories emerged:

Structures within primary healthcare had an important impact on learning. Organisational differences between PHCTs and CHPs led to problems in planning and preparing PLT. PHCTs were hierarchal, but this varied from team to team. Hierarchy impacted on learning; GPs were granted more learning resources than other groups. Community nursing teams were often isolated from the PHCT at PLT, sometimes having separate learning.

Lack of identification of shared learning needs led to irrelevant learning, especially at CHP wide meetings. Practice managers struggled to identify the learning needs of the A&C staff and the community nursing team. As these groups found PLT to be irrelevant to their work, their attendance at PLT fell, and some preferred to continue working rather than attend.

Relationships between occupational groups had a strong influence on PLT. Many in PHCTs felt distant from the CHPs and some practice managers considered that CHP colleagues were judgemental about their efforts regarding PLT. Community nurses considered they had good relationships with others in the PHCTs, but some relationships were poor. This impacted on practice-based PLT, and on occasions community nurses felt intimidated by the presence of GPs, and would take annual leave rather than attend.
Collective learning in Secondary Care Teams

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Context
In the current era of rapid change in the NHS, patient needs are increasingly complex, demand is escalating, and professional boundaries are changing. To cope with this, healthcare teams require enhanced skills in working and learning together. The growing emphasis on teamwork within the National Health Service (NHS) has made it a priority to understand how health care teams learn together and cope with change.

Background
Earlier work in primary care has shown that informal collective learning is a powerful team coping mechanism that develops through experiential, evolving and implicit learning processes. These processes are predominantly relational in that they rely on the extent to which team members know and understand one another as people. This makes shared learning an effective but ‘messy’ dynamic, the motivation for which is internally generated by the team itself.

Objectives
The aim of the work was to explore how collective learning, change and improvement happen in secondary care teams and describe examples of good practice in team-based learning.

Methods
Observational methods and qualitative staff commentaries. Data was gathered with NHS ward teams in chronic, acute and clinic settings at a Scottish hospital site. Participants include a wide range of clinical, nursing, ancillary and clerical staff.

Findings
The fluidity of the membership of secondary care teams adds further complexity to the dynamics of team learning in healthcare. The number and diversity of staff in secondary care settings means the concept of a ‘team’ itself is contested. The study also found an important factor inhibiting the potential for quality improvement in NHS secondary care teams is a culture of professional territorialism and the assumption that healthcare staff in less powerful positions will not contribute as fully to the effectiveness of the healthcare team. Less well recognised staff groups such as ancillary and clerical staff have less opportunity to bring their expertise to bear on the quality improvement challenges facing ward teams and to play a full role in generating improvement solutions. This has created an untapped pool of staff expertise and awareness, which teams often neglect to draw upon even as they seek to address ongoing challenges facing them. These findings indicate that genuine and effective collective learning will require a re-humanisation in the way healthcare see each other and work together: that is, an attitudinal change towards issues of power, expertise and hierarchy, wherein healthcare teams look for and expect genuine value in the contribution of their colleagues, regardless of traditional positions.

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The preliminary development and testing of a global trigger tool to detect error and patient harm in primary care records

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Introduction
Error and harm in healthcare are common, costly and often preventable. Around 300 million consultations take place in UK primary care annually, but reliable evidence of error and harm levels remains severely limited. The ‘trigger tool’ is a relatively new improvement method which helps to detect and quantify errors and adverse events through the focused review of patient records. This enables the healthcare team to learn more about what goes wrong in practice and develop targeted improvement strategies which can be monitored over time. Secondary care studies have demonstrated the effectiveness of the trigger tool method in surgical, paediatric, neonatal, and intensive care units. The aim of this study was to develop and test a global trigger tool for UK primary care.

Method
Members of the west of Scotland GP Audit Development Group adapted and refined the Institute of Healthcare Improvement Out-patient Trigger Tool through a modified Delphi technique. A content-valid, 10-item global trigger tool was developed for primary care. In a pilot study, a random sample of 100 clinical records was selected from each of five general medical practices recruited to participate. Two clinicians trained in the trigger tool method reviewed a 12-month period of each record to identify errors and patient harm, grade events using a national index and judge preventability.

Results
Review of the 500 records revealed 2251 consultations and 730 triggers. A singular adverse event was found in 47 (9.4%) of records, indicating that harm occurred at a rate of 1 event per 48 consultations. A further 17 (3.4%) records contained evidence of a potential adverse event. 27 of all 64 events were judged to be preventable (42%). The severity of harm was low to moderate for the majority (82.9%). Error and harm rates were higher in those aged ≥50 years (P<0.001); most events were medication-related (59.3%). No single record took longer than 20 minutes to review.

Discussion
The trigger tool was successful in identifying undetected patient harm in primary care records and may be the most reliable method for achieving this. It may be an important approach to learning about epidemiology and nature of error and harm in primary care. However, the feasibility of its routine application is open to question. The tool may have greater utility as a research rather than an audit technique. Further testing in larger, representative study samples is required.
Interprofessional training for final year medical students: evaluation of impact on nursing staff and students

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Background
It is recognised that healthcare professionals' understanding of what their colleagues do, and don't do, is likely to impact the effectiveness of multidisciplinary care, the use of resources, and the outcomes achieved for patients. In promoting that understanding, some educators, most notably in Scandinavia, provide practical interprofessional training whereby senior students from multiple disciplines work together, facilitated by qualified staff, to provide patient care. Hull York Medical School (HYMS) operates an interprofessional training ward based on Ward 2, a specialist rehabilitation unit at Goole and District Hospital. Final year students undertake two-week placements.

Aim
To report staff and student evaluations of the first year of the HYMS' interprofessional training ward placement.

Methods
Staff: Focus groups; Questionnaire for psychological and social factors at work (QPSNordic). Both were undertaken before commencing and after placements were completed. Students: ‘Readiness for Interprofessional Learning’ (RIPL) surveys (pre-/post-placement); Post-placement evaluation; Self-evaluation against learning outcomes: 1. Understanding other professionals’ roles; 2. Demonstrating knowledge, skills and attitudes appropriate to quality care; 3. Dealing with complexity and uncertainty; 4. Interprofessional collaboration.

Results
From August 2007-March 2008, 107 final year students undertook two-week placements, working in groups of 8-10 students. Four final year nursing students undertook three-month placements.

Staff evaluations: The pre-placement focus group revealed both apprehension and enthusiasm among staff. The second focus group, undertaken when all placements for the year had been completed, reported unexpected enjoyment, hard work, information exchange, and pride in the Ward’s performance. QPSNordic subscales remained stable when students joined the ward.

Student evaluations: Mean pre- and post-placement RIPLs scores increased significantly (p<0.001) though with large individual variation. The post-placement evaluation surveys indicated that students viewed the interprofessional experience positively and that team-working and continuous access to patients helped them achieve the learning outcomes. Self-evaluations were insightful, suggesting improved understanding of other professionals' roles, sharing of students' own skills, and multiple encounters with complexity and uncertainty that were shared and resolved with team colleagues.

Conclusions
The evidence provided by systematic evaluation of student learning, ward functioning, and placement experience, suggests that the Interprofessional Training Ward placement provided learning experiences relevant for both students and staff. The requirement of staff to facilitate student learning was assimilated into their primary role as patient carers without disruption of working relations; their performance generated pride among the group. Ongoing improvements include increasing the number of professions represented and the numbers of students from professions other than medicine.

Acknowledgements
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Learning about, discussing and interacting with colleagues: Student and facilitators’ perspectives of an online Interprofessional e learning medium

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Background
This paper will disseminate 3 years of evaluation findings from an Interprofessional e Learning Pathway (IPLP), delivered by Coventry University linking with the Warwick Medical School, University of Warwick, UK.

The educational rationale for the pathway is to enable students to explore issues relating to achieving effective and appropriate inter-professional working in practice in order to improve the quality of care for patients, service users and/or clients. The predominant learning activity is an online discussion based on authentic patient, service user, client journeys or more recently a multidimensional environment housing a collection of families developed by Centre for Interprofessional e Learning. IPLP is delivered over a period of 4 weeks, at yearly intervals to 13 professional groups. The learning outcomes are adapted from the Interprofessional Capability Framework (CUILU 2004) and focus on understanding the roles, values and philosophies of other professions in relation to team-working, communication channels, anti-discriminatory practice, and impact on patient/client focused care. Changes in the assessment strategy of the pathway over this period of time will be discussed.

Aims
To share student and facilitator experiences and perceptions of an online IPL pathway over a 3 year period. The strength and weaknesses of delivering virtual IPL will be highlighted and discussed.

Material and Methods
Over a 3 year period, students completed online questionnaires at the end of each offering. Over the same period facilitators completed online questionnaires, with a subgroup participating in focus groups. All qualitative and quantitative data was analysed using SPSS and Atlas TI tools

Results
Findings from over 1500 student questionnaires will be presented, outlining students’ perceptions of the environment, uni and interprofessional learning, value and applicability of learning objects and the changes in the assessment process. In addition approximately 20/70 facilitators completed online questionnaires exploring their views on facilitating interprofessional groups within an online environment, and the value of the e learning objects and student participation. Findings from focus groups (to be undertaken in April 2009) will be presented.

Conclusions
The strengths and weakness of this type of IP e Learning will be highlighted and will be valuable to educationalists and clinicians delivering IPL.
Exploring the influence of curricular experiences in the development of professional self identity in student doctors and dentists using the Professional Self Identity Questionnaire

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Background
Professional self-identity (PSI) is self-attribution to a professional group. PSI is influenced by a number of factors including personality, legitimate peripheral participation in the profession and role modelling and reflection, and has been linked to the development of medical professionalism. Research into PSI has so far focused on unpicking what PSI may be made up of. Little attention has been paid to the influence of curricular and environmental factors in the developmental pathway of PSI.

Aim: Examine if there are differences in the developmental pathway of PSI between student doctors and dentists, and whether the differences are influenced by the different curricular experiences.

Method
The Professional self-identity questionnaire (PSIQ) was distributed to undergraduate student doctors and dentists in years 1 to 5 at the University of Sheffield. Analysis: data was summarised with descriptive statistics and interprofessional comparisons were carried out by Mann-Whitney U test.

Results
Response rate: 76.3 to 29.6% (in year 5) for student doctors and 75.6 to 15.4% (in year 5) for student dentists. PSI is greater in more senior students in both professions. Student dentists generally have higher self-ratings than student doctors at all time points, with the largest differences (p<0.05) appearing in year 2 (x̄:3.48, 2.63 respectively) and year 4 (x̄:5.05, 4.03 respectively). Year 1 students in both professions feel similarly, but from year 1 to 2 change in PSI rating is significant (p<0.05) for student dentists but not for student doctors. Curricular analyses suggest this may be attributed to clinical training. Individual item analyses: Significant differences (p<0.05) are observed in Teamwork in all years except the final, significant differences (p<0.05) were observed between years 2-4 with Communication, Patient Assessment and Emergencies. The Emergency domain is the lowest scoring domain and has the highest missing value rate in both professions. Thirdly, both professions profile similarly for engagement with Cultural Diversity, Ethical and Moral Issues, Patient Records and Reflective Practice. Examination of these findings through analysis of the medical and dental curricula indicates that curricular experiences maybe the key determinants of the PSI rather than extra-curricular factors. Since professional self-identity development is an important goal of undergraduate training, our findings have relevance for those determining the structure and content of curricula.

Conclusion
Curricular factors, especially clinically-based training, appear to be key determinants of professional self-identity development in student doctors and student dentists.

Acknowledgement
Michael Smith, Programme Evaluator, School of Clinical Dentistry.

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New Researcher 2009
Unravelling ‘learning by doing’. Programmatic research on junior doctor’s workplace learning in postgraduate medical education

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My case for receipt of the ASME new investigator award is based on the programmatic research I have conducted into workplace learning in postgraduate medical education. After graduating from medical school in 2005 I was struck by the paucity of high-quality research concerning the learning processes of junior doctors’ on their way to become medical specialists. Using the classification of medical education research proposed by Cook et al., most publications on postgraduate workplace learning were descriptive or justifying, i.e. they either described what work was done or evaluated whether an educational intervention worked. What was lacking was clarification research, i.e. research that tried to understand how or why things work. The need to understand how junior doctors learn from participating in provision of patient care was added to by the major changes postgraduate medical curricula were facing.

Core features of the research project
Starting with the general research question “how do junior doctors learn in the workplace”, I embarked on a research path for which I set myself a number of goals. In essence I aimed for my research to be programmatic research that would fill the gap in postgraduate workplace learning based on translational research. In this application I have described a selection of my research projects. I started with two qualitative studies aimed at investigating both specialist registrars’ and clinical supervisors’ perspectives on how trainees learn in the workplace. For both studies I used a grounded theory approach. The result of an elaborate analysis was a description of trainees’ workplace learning that focused on clinical tasks and how they were interpreted by individual trainees. These findings gave rise to new hypotheses which I tested in two subsequent quantitative studies. One was a randomized trial concerning the influence of contextual factors in trainees’ interpretations. It concluded that context can influence trainees’ constructions of a work-related situation by activating mental concepts which in turn affect how they interpret situations. The other research project was a nationwide survey in the Netherlands among inexperienced obstetrics and gynaecology registrars. The survey assessed a number of variables that could explain why junior doctors actively look for feedback. Structural equation modelling was used to test a hypothesised model. Among others, consultants’ supervisory style played an important role in creating an environment in which trainees would ask for feedback. Based on this work, I have written papers on how specialist registrars can learn optimally from everyday clinical practice and on how empirical results combine with findings from a variety of research domains to form a conceptual foundation for workplace learning that can be used by other medical education researchers.

Impact and implications of my research
Overall I have (co-)authored nine papers that were published in international journals such as British Medical Journal, Medical Education, Academic Medicine, and Advances in Health Sciences Education. My work has led to practical implications for both clinicians and researchers. For instance, to create a safe learning environment, consultants should combine a supportive supervisory style with an instrumental one to indicate to trainees how valuable directly asking for feedback can be. My work has also motivated new researchers to use theory and apply a conceptual framework to the design and analysis of their research.

Conclusion
I am considerably less than seven years from qualification as a medical doctor. In that time I have developed myself as a researcher of workplace learning who is able to bridge medical education with other research domains. In my view that has to be done to close the gap between education research and clinical practice. My research has been both qualitative and quantitative. It has been observational and experimental, and included complex psychometrics as well as rigorous qualitative research. It has allowed me to synthesise previous theory and empirical findings into a conceptual framework of workplace learning in postgraduate medical education.
New Technologies
Supporting Scholarship in Medical Education: The role of social media and networks

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The problem: The model of Excellent Teachers <->Scholarly Educators <->Scholars of Education\(^1\) suggests three levels of scholarship in medical education. Whilst conferences and academic journals can provide the means for scholars of education to reflect and disseminate, it is less clear how scholarship can be supported at other levels. Fincher and Work\(^2\) state that all forms of scholarship require peer review and dissemination but at present there are few opportunities for this outside one’s own institution. And it has also been suggested that few educators even participate in “critical reflection of day to day teaching”\(^3\).

The solution: The tools of web 2.0 are ever changing and developing. They include social bookmarking, social document sharing, (micro-)blogging, image and video sharing, and online conferencing. As they are free to use the barriers to recording and sharing of reflection on practice are immensely reduced. Conversations between colleagues with shared interests in different institutions, even time zones, can occur.

What happened? : In the past year I have been exploring the potential of these tools to form an online community of medical educators. The core activity has been maintaining a blog on medical education in which I have reflected on my practice and received feedback from colleagues in medical education, other healthcare professions, patients and students. I have also developed areas for those interested in medical education to participate in discussions on research and how it may affect their practice. The use of other tools will be illustrated.

Strengths?: Low cost, rapid feedback, open and transparent.

Weaknesses?: New participants can feel swamped by the plethora of tools available and uncertain of the time to invest. At present there is low take-up of social media amongst medical educators as although we have a culture of sharing, many do not see the relevance of these tools to their practice.

Opportunities?: Medical educators can have open and transparent conversations with each other, and also with students and patients, about how their work is developing and refining.

Threats?: Few, institutions are not supportive of process of creating weak links and external networks.

What is needed?: A commitment from individuals to pursue scholarship in their teaching, the dedication of time to this process, and the recognition of the value of this activity by institutions. Further evaluation of the benefits to participants.

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Audit of a web-based electronic PBL system in clinical medicine: usage and student opinions

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Introduction
The Internet is potentially a powerful tool for distance learning. Medical students in clinical years are often placed at significant distances away from the university campus in very small groups that make it difficult to engage in problem based learning (PBL) type exercises, and organizing tutor/facilitator support may be extremely difficult.

Method
A learning package called eILA (Electronic Integrated Learning Activity) was developed to allow distance and asynchronous learning and group work to take place. PBL cases and learning objectives were placed on the medical school server to be accessed by student groups undergoing rotations through specific specialties (anaesthetics, accident & emergency, rheumatology, orthopaedics, cardiology, renal medicine). Online discussion areas were placed for students to upload and share work and all work was to be reviewed by selected F2 level doctors. The system operated January-November 2008 for the fourth year of the MBChB course. This study looks at student and tutor engagement based on server usage statistics, and student perception and satisfaction via an anonymous online questionnaire.

Results
Student usage statistics showed that 96% of the students accessed and engaged with the eILA tool adequately, with 57% logging in to eILA exercises over 100+ times. 61.8% of students uploaded at least the minimum required amount of work for each eILA. Only 53.1% of the work submitted by students was reviewed by tutors.

A total of 128 students completed the online questionnaire of the 256 asked to take part, giving a response rate of 50%. Their responses showed a significantly negative opinion of the eILA system. 93% of students compared the eILA system unfavourably to face to face PBL tutorials in earlier years. 93% of students were overall dissatisfied with the eILA experience and its use as an undergraduate educational tool. Significant issues raised included lack of tutor interaction, lack of face to face group discussion, time consumption and technological problems.

Conclusions
We anticipated that the student body would easily adapt to asynchronous, electronic media for group interaction, as the popularity of social networking (Facebook, discussion boards, chatrooms) in this group would suggest. In the event, the eILA system and rules that we instituted did not prove to be a user friendly and accessible system for students. As a replacement for face to face discussion learning it did not meet student needs; tutor engagement was variable and inconsistent, and the system as a whole was strongly disliked by the student body. It became clear that medical students preferred more traditional forms of learning but there were some positive suggestions that the eILA may be useful to complement face to face tutorial systems.
Distributed Simulation: an innovative tool to enhance medical student education in the operating theatre

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Background
Exposure to the operating theatre (OT) is an important learning component for medical students. Systematic, structured exposure to the OT environment is likely to increase students’ knowledge of the OT and their confidence within it. In practice, however, students’ visits to OTs are carried out in an unstructured manner, mostly determined by staff’s availability and workload. Moreover, unlike specialist trainees, simulated environments are currently not a viable alternative for medical students, due to high capital costs, resources required and limitation to few simulation centres across the country.

We present a viable simulation-based approach to medical students’ learning in the OT: Distributed Simulation (DS). DS is an inexpensive, portable simulation environment made possible through the use of lightweight, self-supporting photo-realistic backdrops that recreate the OT environment. DS can thus be transported and quickly set up anywhere, allowing full-immersion, experiential learning without the prohibitive costs of a simulation centre. The aims of this study were to systematically explore medical students’ perceived training needs in the OT, assess these against trainers’ perceptions, and explore the viability of DS as a training environment.

Methods
20 individual semi-structured interviews with 10 trainers (senior Residents/Consultants) and 10 medical students were conducted by trained researchers. Interviews were audio-recor ded, transcribed verbatim, analysed and coded independently by 2 researchers. An iterative coding process identified emergent themes until saturation was reached. Reliability in the coding was assessed quantitatively (Pearson r).

Results
Adequate reliability was achieved in the coding of emergent themes from both students and trainers (rs 0.57-0.82, ps <0.05).

Medical students: good learning experiences involved hands-on experience/scrubbing, ability to see the procedure clearly and active involvement with the team. Students felt that their preparation for the OT is typically inadequate and that practical preparation and explicit learning objectives would significantly enhance their learning.

Trainers: weaknesses in current student training included lack of awareness of sterile fields, OT layout and etiquette, basic anatomy, and team interactions. Trainers expected better prior knowledge of the patient, roles within the team, and safety issues in the OT. Students and trainers concurred that DS is a potentially valuable learning aid – especially for the domains of scrubbing/gowning, instrument knowledge, and safety protocols.

Conclusion
There is a clear need to improve medical student training in the OT. Our findings suggest that simulation-based training using DS as a platform offers a resource-effective aid for undergraduate OT teaching, desirable by both students and their trainers.
Postgraduate Education
Introducing a portfolio-based accreditation process for supervisors in secondary care: a report from the London Deanery pilot study

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Three interlinked trends in postgraduate medical education; increasing accountability, professionalisation and the pursuit of ‘excellence’ have recently come together in a number of national policies and regulations. These are encapsulated in the Postgraduate Medical Education and Training Board’s Generic standards for training which lay down the regulatory requirements for both training providers and trainers themselves.

The PMETB ‘Standards’ require consultant trainers to ‘be selected and demonstrate ability as an effective trainer’. Lord Darzi’s vision for the NHS, A High Quality Workforce: The NHS Next Stage Review, takes this one step further - formally recognising that the quality of medical teaching and training is inextricably linked to the quality of patient care – and outlines the government’s intention that all educational supervisors in secondary care undergo ‘mandatory training and performance review as currently exists in primary care’ (p17).

The inescapable corollary of these developments is that in future, local education providers will need to demonstrate that those involved in supervision within their organisation have the necessary knowledge, skills and approaches to help develop and support trainees. In response, the London Deanery has developed a framework for the professional development of supervisors to enable Trusts and other providers to accredit their local faculty. The framework also provides a vehicle for structuring personal educational development and a basis on which Trusts can plan their local faculty development provision. By January 2010 (and in accordance with PMETB requirements) the Deanery expects all Trusts to have implemented mandatory training and a developmental system of three-yearly appraisal of all consultants involved in the activity of educational supervision against the Framework.

The London Deanery Professional Development Framework requires demonstration of ability and training in seven areas of activity:

- Ensuring safe and effective patient care
- Establishing and maintaining an environment for learning
- Teaching and facilitating learning
- Enhancing learning through assessment
- Supporting and monitoring educational progress
- Guiding personal and professional development
- Continuing professional development as an educator

Since October 2008, the London Deanery Framework has been piloted in 16 London Trusts. This workshop will report the evaluation of this project, exploring the experiences of supervisors and highlighting the challenges that have emerged. It is hoped that this will assist others working in postgraduate medical education as they start to implement the requirements of both government and the national regulator.

References
A proposal for a study to test the applicability of Ericsson’s ‘deliberate practice’ to the acquisition of subspecialist surgical skills

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Context
Ericsson (2004) introduced the concept of ‘deliberate practice’ - the repeated practice of specific, discreet and very limited elements of a performance - as a way of reaching and sustaining a higher level of performance, and also of achieving continuing improvements in performance, rather than levelling off at a plateau.

The Australian School of Advanced Medicine (ASAM) at Macquarie University, Sydney, Australia is developing a series of education programs for the degree of Master of Advanced Surgery, for specialist surgeons (e.g. in orthopaedics) who wish to subspecialise (e.g. in surgery for instability of the shoulder). Competency-based assessments in these programs test for consistent high-level performance of the psychomotor and technical skills required for competent practice.

Objective
To develop a study to address the research question(s):

Does ‘deliberate practice’ (DP) of elements of a surgical procedure make learning better and quicker? Does it lead either to more rapid achievement or to a higher level of skill (or both)?

Study Design
Such a study presents a number of interesting design challenges which must be met; proposed solutions will be presented.

(a) Sample Size The number of learners in any one subspecialist program will be small, and it would be desirable to enrol all learners in all ASAM degree programs at this level who agree to participate. There may be conflicting demands between power and generalisability.

(b) The intervention will be the identification of specific (DP) performance elements within an operative procedure, which the supervising surgeon will emphasise to the learner, who will be encouraged to focus on the performance of these elements with great care.

(c) A number of controls will be required: within-learner, within-procedure, and within-subspecialty. These will be based on the learners’ performance on other (non-DP) performance elements, to whose identity the learner will be blinded.

(d) The outcome of learning will be the learner’s performance, graded as: ‘Needs More Practice’, ‘Competent’, or ‘Outstanding’, on each Performance Element on each occasion that the procedure is performed, with digital video-recording. The measure of achievement will be based on the rate at which the learner moves from one grade to the next with repeated performances of the same procedure.

(e) Observer bias will be tested by comparing the grades awarded by the supervising surgeon with those awarded by other surgeons the learner assists during the program.

Reference
What is a good GP? Developing and evaluating a multi-source feedback instrument for GP Appraisal in Scotland

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Peer multi-source feedback (MSF) relies on a doctor and his/her colleagues completing questionnaires which ask them to rate the doctor’s performance against a series of statements about observable behaviours. Although MSF reports are accepted as supporting documentation for GP appraisal in Scotland, no general practice colleague questionnaire has previously been developed in the UK. In order to develop an MSF tool for general practice, we surveyed ten primary health care teams with the question “what is a good GP?” The 1588 statements we collected were analysed for themes to develop domains and items. In order to determine the content validity of the questionnaire, we asked eight primary health care teams to rate items using a content validity index scale. The resulting MSF questionnaire has six domains and 34 items.

Despite recent recommendations for MSF to be undertaken by UK doctors, there is conflicting evidence whether this method of providing feedback can bring about improvements in practice. Our early evaluation of the NHS Education for Scotland internet-based GP MSF process employed mixed methods to capture experiences of GPs and their appraisers. Face to face interviews were undertaken in phase one of the evaluation, the result of which were used to develop an evaluation questionnaire, administered in phase two of the evaluation. MSF was found to be feasible and acceptable to participating GPs and appraisers. Our findings suggest that this formative model which uses a GP-specific tool and trained appraisers to facilitate feedback, may increase the educational potential of MSF.

References

The Scottish Prospective Trainers Course (SPTC) aims to align the skills and attitudes of the GP trainer with skills and attitudes that must be acquired during the GP Registrar year. Competency in criterion audit, significant event analysis and consulting is essential. The SPTC makes compulsory the submission of materials in these areas for independent review by trained peers as part of an established educational model. In order to determine if feedback provided by trained peers was acceptable and had an educational impact we employed a mixed methods approach.

Data from interviews with five GPs informed the development of a postal questionnaire, which was used to survey 65 GPs from 4 training cohorts between 2005 and 2007. 55/65 questionnaires were returned. Study participants found independent feedback by trained peers for the SPTC to be acceptable. The percentage of participants who reported improvement in knowledge and skills following participation was 75.5% for criterion audit, 67.3% for significant event analysis and 46.3% for video of consultations. Results demonstrate the developmental benefits of peer feedback activities. Further work should determine whether this method of providing feedback in circumstances outside the SPTC has educational potential.

Reference
Neurones Matter – developing a plastic training scaffold for delivering effective and efficient vocational education

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Recent research in neuroplasticity theory is informing development of our vocational education programme for general practice. New Zealand has a nationally consistent programme, blueprinted against our curriculum and delivered regionally in a seminar day programme with supervised registrars working in teaching practices. The domains of our curriculum are Communication Skills, Clinical Expertise, Scholarship, Professionalism and Context of General Practice. These domains formulate a changing training scaffold using specific and varied learning activities allowing for efficient growth and including novelty in training.

Fostering curiosity and focus, analytical exercises on ambiguous findings, along with non analytical experience, practise with semantic qualifiers, varied illness scripts and repeated mental or physical practice for skill proficiency are all evidenced in our registrar and educator research across the curriculum domains. This research will be presented as qualitative illustration of the underlying neuroplastic mechanisms now recognised as the essential foundations for continued effective professional development. Recent innovations in light of this theory will be described along with proposals for further programme research.

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Medical graduates’ preparedness for practice: questionnaire responses from three UK medical schools

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Background
Previous research has highlighted that many medical graduates feel unprepared to start work as a doctor and that this varies between medical schools. A study was carried out to explore variations in the preparedness of medical graduates of three different medical schools. As part of this study an anonymous questionnaire was developed to collect data on the perceived preparedness of graduating cohorts from the three study sites (Newcastle, Warwick and Glasgow medical schools).

Aims
To compare the perceived preparedness of graduates from three UK medical schools which differ in curriculum, entry criteria and approaches to teaching.

Methods
A fifty-three item cohort questionnaire was devised from data collected from focus groups with final year medical students and Foundation Programme trainees (years one and two), and with reference to the GMC’s Tomorrow’s Doctors, an existing questionnaire used at Warwick University, relevant literature and input from clinical experts. The response format was a five-point Likert scale. Questionnaires were distributed to new graduates from the three sites at pre-shadowing events, completed at the time and returned anonymously to researchers attending the session.

Results
Overall 69% of the graduating cohort completed questionnaires. Analysis indicated similar levels of preparedness at all three medical schools (overall means of 3.5 on a 5 point scale). Some statistically significant differences were observed between sites, but actual differences were small (for example means for ‘writing out death certificates’ varied by 1.03 and ‘calculating drug doses’ by 0.73). Where differences arose no one site emerged as having the highest preparedness ratings. Larger differences were found between questionnaire items within sites (means differing by up to 1.79). Respondents at all sites indicated lower preparedness in some areas. The areas they were least prepared for were prescribing and carrying out complex procedures. Common perceptions of greater preparedness were related to working as part of a team, probity, communication skills and clerking.

Conclusion
The questionnaire identified perceptions of preparedness for practice. While medical school may have a slight effect on perceptions of preparedness to begin practice, the variation between areas of low and high preparedness is common between different medical schools.

References
Factors influencing junior doctors calling for help in acute situations

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Previous studies have demonstrated that failure to appreciate clinical urgency, lack of knowledge and supervision, and failure to seek advice are all factors that result in suboptimal care and contribute to patient mortality and morbidity. Furthermore, during a recent acute care simulation study, an unpredictable pattern of calling for help was observed. This study aimed to explore the factors that influence trainees’ decisions to call for senior help in clinical practice when patients are critically unwell.

Methods
Questionnaire data was gathered from thirty Foundation trainees during attendance at a simulation study. Further detailed qualitative interviews were carried out with eight of these trainees. Using Critical Incident Technique, trainees were asked to recall a challenging incident when they had been involved in the management of an acutely ill patient and had either failed to call for help or had called for senior assistance but failed to be supported in that call. Through an analysis process of manual coding, category formulation and constant comparison, seven categories were identified and thematically organised.

Results
The findings of the study were organised into Personal, Cultural and Organisational themes. The table illustrates the seven factors identified by the trainees.

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Factors included were the trainee’s ability to recognise complex conditions, ability to prioritise patients, previous clinical experience, and prior training. Trainees were also influenced by anxieties regarding job progress and perceived respect from seniors even in these acute situations. The fact that they seldom received feedback following such encounters, and the sometimes critical nature of feedback when given, was also identified as a factor influencing their decision to call. Trainees also report that their confidence, knowledge, skills and experience in their ability to manage acute situations are affected by a lack of formal feedback and support from their supervising seniors.

Conclusion
It is clear that many things influence a junior doctor’s decision to call for help, however, our results suggest that, even when dealing with critically unwell patients, there is not one single factor, but rather multiple factors, that account for trainees’ decisions whether to request senior assistance. The inconsistency of feedback and support is reducing the potential for learning in these situations. To improve patient safety a more structured approach to calling for assistance and sharing experiences is required.

References
Professionalism
“Oh I’d better wash my hands because you’re there”: effects of medical students’ acts of resistance during medical workplace learning encounters

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Introduction
An act of resistance has been defined as “a conscious attempt to shift the dynamics or openly challenge the givenness of situational power relations”¹. So resistance shifts the expected trajectory of events and momentarily subverts power relations when injustice is perceived and opportunity arises. Through narration, stories of resistance contain explicit notions of opposition, transformation, and moral victory. We are analysing medical students’ narratives about professionalism dilemma situations where they contested authority in order to understand how they managed situations when they felt the need to challenge the way things are done, rather than the way they believed things should be done, in clinical settings.

Methods
Students from medical schools in England, Wales, and Australia participated in focus groups and individual interviews to discuss professionalism dilemma situations using narrative interviewing techniques. To date, 6 focus groups and 15 interviews have been conducted in Australia (n=39), 12 focus groups and 5 interviews in England (n=87) and data collection is currently ongoing in Wales. The data is being analysed using Framework Analysis³.

Results
Preliminary analysis has identified three content themes: (1) Definitions of professionalism; (2) Medical students’ dilemma situations; and (3) Students’ talk about patients and healthcare professionals. Relevant to theme 2, this paper focuses on aspects of common dilemma situations with a sub-theme about ways in which students negotiate events which they feel run counter to the way they believe things should be done. For example, students’ stories included how they commonly witnessed clinicians not washing their hands between examining patients. Instead of verbally challenging these doctors, students explained how they continued to wash their hands in front of senior colleagues, despite receiving criticism for their ‘unrealistic’ hand washing practices. Interestingly, some stories concluded with the claim that students’ role modelling of thorough hand washing to senior colleagues encouraged these colleagues to change their hand washing behaviours.

Discussion
Students’ stories of their acts of resistance are an important source for the understanding of how students actively construct their identity and negotiate power relations between themselves and clinicians. It is therefore important that we attend to both what these acts are, how they are executed and how they are storied in order to tease out the relevant factors that facilitate students’ acts of resistance and how these might impact on changing the culture of medical education practice in clinical settings.

References
Selection
The first two years use of UKCAT scores in student selection by UK Medical and Dental Schools

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Twenty-three medical schools and 8 dental schools (‘the schools’) introduced the UK Clinical Aptitude Test (UKCAT) in 2006, joined by three more medical and one further dental school in 2007. The aim of UKCAT was to produce a fairer tool for the schools to use as they wished in their selection decisions to make offers of interview and/or of places, and to support widening participation initiatives¹.

An annual retrospective key informant telephone survey was undertaken to establish how schools used the UKCAT results in 2006 and 2007, based on structured interviews with senior admissions staff at every participating school using a pre-circulated questionnaire. The results are presented here.

Schools derived various scores from the UKCAT results, which were then used in four main ways: borderline, factor, trade-off and threshold. The overall pattern of use changed from the first to the second year.

The borderline method used UKCAT scores only to discriminate among the small group of applicants lying at a ‘decision borderline’ who were indistinguishable on the school’s other selection criteria. This was the most popular use in 2006, less popular in 2007. This method allowed schools to minimise the impact of using UKCAT scores, reflecting schools’ concern not to penalise applicants through heavy-handed use of a new test.

The factor method added the UKCAT score of every applicant to the score the applicant obtained from the school’s usual method of assessment, thus ranking by total score determined the decision. The whole range of UKCAT scores from all applicants were used, given weights ranging from 4% to 33% by different schools.

Similar numbers of schools used a trade-off method in 2006 and 2007, whereby the UKCAT score compensated otherwise weaker applications. Each application was scored by the school’s usual method, then a high UKCAT score could compensate for low initial marks, leading to an offer decision. This trade-off rescued applicants below the usual boundary for an offer, and was the most explicit widening participation use of the UKCAT score. No school employed the converse ‘reject’ trade-off.

Few schools in 2006, but more in 2007, introduced a minimum or threshold UKCAT score to be exceeded for the applicant to reach the next stage in the selection, which was applied after assessment of either the academic qualifications or the UCAS form. The standardised threshold total scores ranged from 2350 to 2600.

Reference
Using UKCAT Scores to Predict First Year Exam Performance

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Introduction
In 2006, twenty-six UK Medical Schools included the United Kingdom Clinical Aptitude Test (UKCAT) into their admissions processes. The test was specifically designed to identify ideal medical students; however, there is little evidence to support this claim. While still in its infancy, there are ways to begin investigating the UKCAT’s contribution to the selection of medical students. This study focuses on the ability of the UKCAT to predict the performance of Newcastle Medical students on three first year exams used to measure knowledge and understanding.

Methods
Gender, UKCAT score, personal statement score and interview score were used in regression models to determine whether UKCAT scores contribute to the prediction of first year performance on three written exams (November, January, and May). Models controlling for previous exam performance were also included for the January and May exams.

Results
Personal statement score, interview score and gender were not significant predictors in any regression model. However, UKCAT score was a highly significant predictor of performance on all three exams: (November and January, p<.001), and (May, p<.01). The proportion of variance in exam scores explained by each model decreased with time: (27% of variation in exam scores was explained in November exams, 22% in January, and 12% in May). Further analysis revealed that including previous exam scores would considerably improve the model fit, thus increasing the percentage of variance explained. When November exam scores were included in the January model, 47% of the variance was explained. Furthermore, when November and January examination scores were included in the May model, 69% of variance was explained.

Conclusions
Although these results represent a small cohort from a single university, they indicate that the UKCAT is a significant predictor of first year performance at Newcastle. While the predictive ability of the UKCAT seemed to decrease as the academic year progressed, further analysis indicates that this was not necessarily the case. Performance on the January exam was influenced by performance on both the November exam and the UKCAT. Likewise, performance on the May exam was influenced by performance on the November and January exams and the UKCAT. As each exam was taken, variance explained by UKCAT became overshadowed by variance explained by previous exam performance. While exam performance is obviously unknown at the time of admissions, the models indicate that the UKCAT explains a significant portion of variance beyond what is already explained by previous exam performance.
The Efficacy of a Machine Marked Test for Recruitment into Acute Specialties in the South West Peninsula Deanery

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Introduction
As part of their validated recruitment process, General Practice (GP) uses a Machine Marked Test (MMT) to assess candidates for shortlisting. We tested this for selection of applicants to Core Medical Training (CMT), Anaesthesia and Acute Care Common Stem (ACCS); The ‘Acute Specialities’ (AS) in 2008 as a DH Wave 1 funded pilot. We report preliminary findings.

Method
With ethical approval and informed consent, candidates shortlisted for AS posts in 2008 underwent a MMT of 99 validated GP Clinical Problem Solving (CPS) questions and 40 new questions developed specifically for AS. Internal reliability and validity were assessed using candidate feedback and correlations with shortlisting / interview scores and specific measures of item quality were performed. Subsequently, a cohort of specialty trainees in AS (n=59) rated specific items for ‘appropriateness for selection to AS’.

Results
MMT response rate was 74% (n = 142). Compared to the GP section of the MMT the AS pilot section achieved a lower level of internal reliability ($\alpha = 0.65$ vs. 0.92), was more difficult (mean item facility $\xi = 0.50$ vs. 0.61) and of poorer quality (mean item partial $\phi = 0.09$ vs. 0.29).

Candidate feedback for relevance of the MMT was significantly lower (mean score = 3.3 out of 5, $p =0.001$) than the other selection stations. AS doctors gave a significantly higher mean rating for ‘appropriateness’ to the AS versus the GP questions ($t=10.68, df=23, p<0.001$).

Discussion
Validated CPS questions written for GP selection and refined over years of development perform well in terms of internal reliability and item quality but have low face and content validity for selection into AS.

\[\xi\text{ item facility} = \text{proportion of candidates answering the item correctly}\]

\[\phi\text{ item partial} = \text{correlation of item score with total score excluding the item itself}\]
Preliminary findings suggest that developing a MMT for Acute Specialties may be a useful method of selecting candidates for selection centre in AS.

Reference

Acknowledgements
General Practice Recruitment Office for providing MMT items and Work Psychology Group for help with data analysis. Department of Health Funding.
The novel use of Latent Class Analysis to evaluate the effectiveness of student selection to an undergraduate medicine course

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We describe the novel use of Latent Class Analysis (LCA) to evaluate the effectiveness of the student selection process for an undergraduate medical course. The paper briefly reviews the literature concerning the predictive ability of prior academic achievement and interview rating in respect of examination performance and critiques the correlation–based research widely used. It responds to the recognition that the predictive validity of selection tests vary over the undergraduate course and beyond, and that alternative multivariate approaches that take account of change over time may be more informative. LCA is explained, as is its ability to analyse data taken from several samples at one point in time or separate samples drawn from the same population at two or more time points.

We evidence LCA as an effective and powerful statistical tool to construct, and to compare and contrast probabilistic typologies of undergraduate medical student performance using data from year two medical students (n=198) studying at Peninsula Medical School. Both total UCAS tariff and score on structured admission interview were shown to have made a significant contribution to the ability of the LCA model to discriminate between typologies of students who share common characteristics in respect of performance on tests of medical knowledge and clinical skill. The LCA showed that strong prior academic achievement and high interview rating are positively related to the likelihood of successful performance in these assessment modules.

Corroboration of the LCA findings was sought by analysis of the same data using binary logistic regression to examine the predictive ability of our selection measures on our criterion measures. This enabled the construction of ‘ideal types’ to summarise the effect of our indicators on the outcome for particular types of students given particular configurations of levels of score on those indicators. The analysis showed that prior academic achievement and interview rating are positively related to the likelihood of success in the examination performance of these year two students. Importantly, the ‘ideal types’ produced by the regression analysis provided congruent evidence that LCA can accurately discriminate among students in respect of selection criteria at entry and subsequent performance measures. This gives us confidence and a priori rationale to explore the use of more complex LCA models to predict course across the undergraduate medical programme, to further refine the selection process, increase its transparency, equity and reliability, and exploit its potential utility to predict the need for the tailored provision of support for student learning.

References
Multiple mini-interview for medical student selection

J Dowell, B Lynch

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Selecting medical students has long been a contentious and difficult process. In recent years the multiple mini-interview (MMI) has shown potential for reliably assessing non academic attributes that have promising predictive validity. Studies to date have largely been conducted in Canada where medicine is a postgraduate course. Over recent years Dundee Medical School has been refining its admission process and ran a formal MMI process in 2009 for the first time.

Dundee received 1275 applications for 154 places to study medicine commencing in 2009. To date 430 applicants have been processed through a 10-station MMI. Each station was of seven minutes duration, five were traditional focused interviews, one station reviewed the UCAS personal statement and four stations were interactive. Interactive stations involved completing tasks with a helper or having one to one interactions with an actor. Thus, each applicant had a 70-minute assessment. Faculty, current students and experienced simulated patients served as assessors.

An initial qualitative assessment of the process has revealed that it progressed without significant adverse event, provided more meaningful data than available through traditional interview (in opinion of both assessors and applicants) and was perceived as a fairer process.

The Dundee MMI was based upon the programme developed at McMaster University and published by Eva et al. We elected to present a similar level of challenge to our applicants despite the fact that they were considerably younger and less experienced on average than their Canadian counterparts. We are pleased to report that they not only coped with but appeared to appreciate the intrinsic fairness of this assessment process.

A description of the rationale and development of the process will be presented, along with data on the feedback received from assessors. We believe this information will be of value to others who are considering developing such an assessment.
Students’ perspectives on preparing for and getting into medical school

A Timm

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Admission to study medicine at British Universities is highly competitive and each medical school decides on its own selection criteria and operates its own admissions policy (though applications are handled centrally through the Universities & Colleges Admissions Service, UCAS). Applicants’ secondary school grades at A-level are vital to the selection process everywhere (though some schools may also consider GCSEs, which are commonly taken at age 16). In an effort to distinguish among the many similarly qualified applicants, various medical schools have introduced entrance tests and the majority also interview applicants. For school leavers, prior work experience or volunteering within a health or social care setting is vital and needs to be reflected in the personal statements that form part of the application; together with references from teachers. Most admissions tutors and selection committee members would probably consider the broad outline of this process unremarkable; although medical education journals bear testimony to passionate debates about the specifics of whether (and how) to interview and what the merits of the different entrance tests are, if any.

But what about the students? This study, entitled Hopes and Fears of new medical students sought to find out what students make of this process of gaining admission to medical school. There is some fascinating literature from within the widening participation debate (about explicit and implicit barriers and biases), but the voice and perspectives of ordinary school leavers has remained peculiarly absent from the discussions about medical school admissions. The project asks: How do applicants prepare for medical school? What do they make of this process – the jumping through hoops? Who else is involved in their decision-making? What can they expect from their secondary schools? What do they take away from events such as MEDLINK and other pre-medicine career guidance? What are they planning to do if medicine doesn’t work out?

Crucially, the project started interviewing prospective students (n=12) prior to their arrival at medical school. The data reported here consists of in-depth interviews with students about how they prepared for their university applications; it also compares the interview data with their UCAS statements. Two aspects will be of particular interest to medical school managers, and especially selectors and the presentation will focus on these:

- the degree of variation in students’ prior experience of health or social care settings, and
- the provenance of application materials
Sir John Ellis Student Prize 2009
Winner
Does high cost “high-fidelity” simulation provide benefits?

Nick Fordham, final year medical student, Barts and the London, London

This year’s successful project described a Randomised Controlled Trial evaluating the benefits of using simulation to teach fundoscopy to novice students.

There is a discussion in the current literature as to whether simulations are important for learning clinical skills. Fundoscopy simulators are used in medical schools across the world, both in developed and developing countries. There is, however, little evidence suggesting that the higher cost, “high-fidelity”, simulators are more effective than the lower cost, “low-fidelity” options, or even the absence of simulators.

To identify and quantify any differences in performance of fundoscopy, comparing practice solely on humans with the addition of ‘high-fidelity’ or ‘low-fidelity’ models.

We used a randomised, controlled, single-blinded trial with three arms. Each arm received the same core instruction. Following this, one arm practiced solely on humans, one arm on humans and a ‘high-fidelity’ simulator, and one arm on humans and a ‘low-fidelity’ simulator currently used at a UK medical school. We used an assessment applying aspects from all three groups to measure outcomes on a standardised checklist.

Sixty-four students’ data was analysed. The non-parametric statistical tests used showed that there were no significant differences of fundoscopy performances in the procedural (P=0.17) or identification sections (P=0.85), or the total examination score (P=0.40). Cohen’s Kappa demonstrated good inter-rater reliability on the assessment.

Interpretation

The results have implications for fundoscopy teaching and assessment. Cost effectiveness of simulation needs to be evaluated as clinical skills centres in both developed and developing countries could spend excess money on unwarranted high-cost, “high-fidelity”, fundoscopy simulation.
Sir John Ellis Student Prize 2009
Runner-Up
Peer Handoff Program: Student-designed and implemented medical school orientation to transition incoming students to self-directed learning.

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Introduction
Students entering into a PBL curriculum often have trouble transitioning from a traditional undergraduate education to a PBL based professional educational setting. An orientation program can be a valuable resource in easing student transitions to a new curriculum, but the incoming student orientation, covering procedures and policies, has traditionally been run by faculty rather than students involved in the PBL curriculum. This kind of orientation is 1) mostly forgotten by students, and 2) does not help them transition to learning strategies they need immediately to navigate a curriculum that predominantly uses self-directed small-group learning. We hypothesized that a student peer-designed orientation for incoming medical students would lead to increases in 1) defining self-directed learning; 2) understanding small group methods; 3) comfort with PBL group function; and 4) confidence with information finding skills.

Goals of Program
1) Familiarize 1st year students with the concept of self-directed learning and strategies for using it
2) Enhance students’ familiarity with PBL methods
3) Improve students’ comfort working in a small group PBL format
4) Facilitate the acquisition of information finding skills.

Description of Program
Second year student co-directors worked with education leadership to plan and run a 3 part orientation that began on the first day and extended over the first 6 weeks of medical school. Eighteen 2nd year students were recruited as small group peer leaders.

Day 1: Entering 1st year students were divided into groups of 9 students. Peer leaders guided groups through a case-based exercise requiring group problem-solving and self-directed use of electronic resources. Peer leaders then facilitated panel discussions in the school’s four learning communities about self-directed learning, their personal insights about transitioning to it, and how they came to use it effectively. Day 1 finished with a lecture hall session about giving useful feedback to small group members and faculty facilitators.

1st Week: Peer leaders facilitated a practice PBL session that included a shortened case, identification of group learning objectives, and end of session feedback. Peer leaders offered insights about ways to achieve an effective group process.

First 6 weeks: Peer leaders and their small groups met three times at two-week intervals to provide just-in-time guidance about self directed learning, PBL, and information finding.

Results
Pre-intervention, one week, two month, and one year post-intervention surveys were administered to first year students to assess if program objectives were achieved. There was an increase between pre-intervention and one week post-intervention surveys for 1) defining self-directed learning (Effect Size (ES) 0.62), 2) familiarity with PBL small group methods (ES 0.40), 3) confidence in information finding skills (ES 0.98), and 4) comfort with PBL small group function (ES 0.43). After one year, students continued to increase their confidence in information finding skills (ES 1.28). Their ability to define self-directed learning dropped below pre-intervention levels (ES -0.11), as did students’ ability to identify methods associated with PBL (ES -0.66). Student comfort with PBL function remained elevated with no significant changes after the initial orientation piece (ES 0.55).

Conclusions
A medical school orientation can be effectively designed and run by 2nd year students, providing familiarity for incoming students in the areas of self-directed learning and PBL methodology. A student run program is also an effective tool for long lasting improvement in students’ information finding skills and comfort with PBL small group function. Advantages of a peer orientation include: 1) providing personal insights and directly addressing student concerns about self-directed small group learning, and 2) facilitating channels of communication between classes. One year data suggests that familiarity with concepts such as self-directed learning and PBL methods may need continued reinforcement.

Assistance Provided to Students
Two second year student co-directors, the first two authors of this paper, worked closely with education leadership to design and implement the orientation program. Students worked under the guidance of Drs. Papp and Wolpaw to design a survey instrument that would accurately assess changes in students’ knowledge, skills and attitudes regarding self-directed learning, PBL and informatics skills. The student co-directors also worked with Dr. Wolpaw to train the 18 peer leaders used in this program. This training took place largely under the student directors’ control with timely input from Dr. Wolpaw to ensure successful conveyance of key information that peer leaders would need to best orient new students to a PBL curriculum. Drs. Papp and Wolpaw have provided continued support in all written communication.
Small Grants 2008
Working as a newly appointed Consultant: an investigation into the transition from Specialist Registrar (SpR) to Hospital Consultant

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Aims
This case study explored the views of newly appointed Hospital Consultants (appointed in or after May 2006) within the Mersey Deanery, focusing on their experiences of making the transition from Specialist Registrar (SpR) to Consultant.

Methods
Three phases of data collection took place between May and December 2007: 7 open-ended interviews informed the design of a questionnaire containing open and closed questions which in turn informed the development of a schedule for 6 semi-structured interviews. Twenty eight (19, 67.9% male and 9, 32.1% female) Consultants (21 Physicians, 7 Surgeons) participated in the study from a potential study population of 45 (response rate = 62.2%).

Findings
Participants felt well prepared for their clinical practice as a Consultant but relatively unprepared for the managerial and financial aspects of their role. Formal support mechanisms were rarely established however, informal support networks were generally strong. This was often due to the proactive nature of the new appointees as well as supportive colleagues. Many participants explained they had to learn how to ‘take on the role of Consultant’, for example their words, manner and attitude had an impact on their department. Fifteen (63%) participants believed they had reflected upon and questioned both their career choice and their abilities to fulfil their new role. Career choices were reported to be made during: Specialist training (7, 26.9%); SHO training (9, 34.6%); Pre-registration / Medical School or earlier (10, 38.5%).

Discussion
Preparation for the clinical aspects of the Consultant role is extensive but the managerial and financial aspects are not addressed during Specialist training to the same extent. The difficulty is trying to incorporate an effective and relevant way of preparing SpRs for this aspect of the job, with many of the difficulties faced being Trust specific issues that generic training cannot cover. As previously reported by Brown et al, transition often raises feelings of anxiety and insecurity due to the fear of not knowing fully how to adapt to a new professional role. Previous studies (eg. McKinstry et al) have suggested that formal mentoring programmes would benefit some Consultants. However, findings suggest that these mechanisms are best developed by the individual themselves. Facilitation for this is easier if the Consultant is working in a team that is welcoming and supportive from the outset. There still seems to be a reliance, as in earlier postgraduate experiences, on the support and guidance of friends and colleagues.

References:
“Say 99”: What medical students say to patients during physical examination

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Introduction

By the end of their undergraduate course, medical students should have acquired and demonstrated their proficiency in doctor-patient communication. They must also be able to perform a full physical examination safely and effectively. However, medical students are rarely explicitly taught specific communication skills for the physical examination, and medical students have difficulty extrapolating generic communication skills to the context of the physical examination.

The aim of this study was to identify the frequency and type of verbal communication occurring during “real” physical examinations carried out by medical students. This will be used as a baseline measure for education in combined clinical and communication skills.

Methods

Medical students on GP attachments in fourth year and the start of fifth year at Birmingham, Dundee, Glasgow and Aberdeen medical schools were approached to take part in the study. Students were asked to audio-tape the physical examination component of physical examinations carried out when on attachment. The GP supervisors of consenting students were provided with information about the project and patient information sheets.

Tapes were transcribed and subjected to linguistic analysis using a range of techniques including corpus linguistics and a modified version of conversational analysis (CA).¹

Results

Results will be presented for up to 30 transcripts. Linguistic aspects of the following areas will be discussed:

- how students announce what they are going to do
- various occurrences of minimising language (‘let’s have a little look’)  
- the occurrence of small talk before or during the examination
- how students deal with their lack of knowledge

These findings will be discussed in relation to building a relationship with a patient, and the patient-centred model of medical communication.

Conclusion

This study was designed to create a snapshot of what students are able to do when they have not previously had teaching designed to help them integrate clinical skills and communication skills. The evidence suggests that, although this area is not explicitly taught, students use very similar language. Students struggled to simultaneously undertake clinical procedures and use communicative strategies even at this simple level. These findings have relevance for integrating both clinical and communication skills, and for the incorporation of these skills into more difficult areas such as the pelvic examination.
Small Grants 2009
The purpose, meaning, and added value of placement learning: a qualitative study

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Introduction
This paper reports progress on research conducted at Keele University to further understanding of early experience placements. Initial findings from student interviews will be presented.

What is already known
Medical guidelines endorse early exposure to clinical experience\(^2\) (GMC 2003), despite both a lack of evidence linking educational theory to early experience placements in practice, and a lack of understanding regarding students’ perspectives on how and why early experience contributes to learning in the initial years of undergraduate curricula. Although early experience placements are based on experiential learning principles, assumptions that early experience links basic science to clinical practice contrast with evidence that students with early experience still struggle to apply knowledge in new situations\(^3\) (Littlewood et al. 2005).

What this study will add
This PhD study seeks understanding of how year 1 and 2 students, faculty, and placement providers conceptualise early experience placements. The study provides new research-based knowledge in the developing field of early experience. Insight into student ‘meaning-making’ can guide curricula development in a variety of medical education settings. The objectives are:

- gaining a richer understanding of early experience placements by analysing interview data from significant stakeholders
- considering findings in relation to educational theory\(^1\) (Dornan et al. 2007)

Methods
This is a qualitative study using Interpretative Phenomenological Analysis\(^4\) (Smith & Osborn 2008). Interviews of students, faculty and placement providers followed purposive sampling, and concurrent analysis (considering the content and structure of data) facilitated iterative changes to the interview guide. The interview guide contained semi-structured questions on placement role in learning, integration, knowledge, transferable learning and a case study. Interviews were audio-recorded and transcribed verbatim. Interview data were supplemented by observational work and a critique of relevant literature. Ethical approval was obtained. Further data collection will involve focus groups to discuss findings, from all stakeholders, with student participants.

Summary and outcomes
This paper presents findings from student interviews and discusses students’ perspectives on the purpose, meaning, and added value of placements in the initial years of an undergraduate medical curriculum. Deeper understanding of these experiences should illuminate workplace learning processes and assist development of effective learning. An expected outcome is that, together with data from faculty and placement providers, these findings will be developed into a model for evaluation of placements in various settings.

References
Staff Development
Are consultant supervisors prepared for their role?

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Background
The Postgraduate Medical Education Board (P METB) have taken on the responsibility of ‘Setting and securing the maintenance of standards for postgraduate medical education’. The Gold Guide makes a clear distinction between Clinical supervision and Educational supervision. The document gives guidance on the required training that supervisors need to fulfil their roles and make them ‘fit for purpose’.

Summary of work
A questionnaire was completed by consultant supervisors within a Trust. The data supplied details on previous training undertaken by consultants, to prepare them to undertake supervision of trainees. Individual applications were scored by 2 senior educationalists to determine whether they met the Gold Guide criteria for Clinical and Educational supervision status. Equity and diversity training is a component of both roles.

Summary of results
Return rate 45/114 (39%)

<table>
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<th>Equity and Diversity Training</th>
<th>Clinical Supervisor Training</th>
<th>Educational Supervisor Training</th>
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<td>Yes</td>
<td>Yes 32/45 (71%)</td>
<td>Yes 33/45 (73%)</td>
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<td>No</td>
<td>No 13/40 (29%)</td>
<td>No 12/45 (27%)</td>
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Conclusions
Early responders to the questionnaire appear to show high take up of training courses to prepare them for their role as educational and clinical supervisors.

There appears to be a range of providers of educational training that consultants participate in. Although there are ‘accredited’ educational courses e.g. Physicians as Educators, there is no current agreement on a standardized training course for generic supervisor’s skills.

Take-home messages
Supporting consultants for their role as supervisors will require a long term investment in training, to achieve the standards set by PMETB.

References
3. www.rcplondon.ac.uk
Assessment of Clinical Teaching: Developing an instrument to improve trainee feedback

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Background
Less time in training before reaching senior grades, due to reduced working hours and changes in consultant contracts, is driving improvements in the quality of clinical training. Clinical trainers can have a significant influence on learning outcomes, but many receive no training for this role. Current evaluation instruments provide limited feedback to help improve teaching performance. Most list ‘high-inference’ characteristics, requiring raters to make judgements about the trainer, but only the higher points on the scale tend to be used reducing their ability to discriminate between teachers. ‘Low-inference’ observations of highly specific behaviours provide more useful feedback to teachers. Evaluation instruments tend to apply to whole rotations or semesters, and respondents’ scores are aggregated, thus reducing the specificity of the feedback they provide.

We have developed a psychometrically sound checklist of 38 observable low-inference behaviours to evaluate a single teaching episode. Scores are normally distributed and can be compared with those of peers. This provides trainers with graphical feedback from the perspective of each person present (trainers, trainees and other observers) that could be used to inform reflection upon and modify their teaching.

Aim
We aimed to explore the use of the programme and the acceptability and utility of the feedback provided.

Methods
A web-based cross-informant programme presenting items in randomised order was designed to record behaviour observed during a single teaching episode. Participation in the evaluation was recorded in Trainees e-portfolios. Once data entry was completed for each episode or after a period of two weeks, trainers were able to request feedback on their teaching performance. Trainers were invited to participate in a brief interview to investigate the use of the checklist, and the usefulness of the feedback in reflecting upon and modifying their teaching. Interviews were analysed using thematic analysis.

Results
The web-based programme will be presented at conference. Initial findings from qualitative evaluation of the checklist were that it reminded trainers about alternative teaching strategies. New themes will be presented.

Discussion
We have developed a web-based evaluation instrument to provide fine-grained feedback that identifies strengths and weaknesses of clinical teachers from the perspective of all those present and allows trainers to compare their performance with that of their peers. Trainers have found feedback useful to reflect upon and modify their teaching.

References
Student Misconduct
Unprofessional behaviour in medical students: questionnaire study comparing perceptions of the medical students, doctors, healthcare professionals and the public

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Aims
To investigate the hypothesis that there is a significant difference between the perceptions of members of the public compared to non-medical healthcare professionals, doctors and medical students to examples of medical student misconduct.

Method
61 members of the public, 72 allied healthcare professionals (HCP), 56 medical students and 63 doctors (Drs) were invited to complete a questionnaire. The questionnaire included 10 hypothetical examples of medical student misconduct (S1-4, S6-11) and one example of appropriate conduct (S5). Participants were asked to indicate the level of acceptability of each behaviour on a 3-point scale (1=OK, 2=possibly unacceptable, 3=definitely unacceptable) and then to choose the sanction they considered most appropriate. The sanctions ranged from no reprimand to termination of studies, and were on 6 levels of harshness for 6 scenarios and at 5 levels for the other scenarios. Median responses to questions for each scenario from the subject groups were compared using non-parametric statistics.

Results
180/252 questionnaires were returned (response rate =71%). All 4 groups rated the appropriate conduct scenario (S5: missing lectures after stopping to help in an accident) as acceptable and required no reprimand. All misconduct scenarios were rated ‘definitely unacceptable’ by all groups with the exception of scenarios referring to dishonesty (S2, S6) which students rated as ‘possibly unacceptable’. Sanctions chosen by the 4 groups were similar for the scenarios on academic misconduct (S1,S3,S4) but for the remainder students chose more lenient sanctions than the public and HCP. Sanctions chosen by students were most lenient (reprimand) for dishonesty (S2,S6) and alcohol intake (S8), relatively lenient (repeating task) for academic misconduct (S1,S3,S4) and forgery (S7), harsher (repeating year) for cannabis use (S10) and more severe (temporary suspension) for fraud (S9) and deception (S11). The harshest sanction (termination of studies) was deemed the most appropriate by the public for cannabis use (S10) and deception (S11), and by HCP for fraud (S9) and deception (S11) but students and doctors did not chose it for any scenario.

Conclusions
These results indicate that perceptions of the public as well as non-medical HCP differ from those of students and doctors. Medical students in particular seem to judge a range of misconduct behaviours less harshly than the public and HCP. Their acceptance of dishonesty and alcohol use may be influenced by their knowledge of the frequency of these behaviours amongst their peers.
Teaching About Specific Subjects
Development of a Core Undergraduate Curriculum for Prescribing (British Pharmacological Society Prescribing Initiative)

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Introduction
Prescribing is a complex and challenging task, which is becoming increasingly difficult. Lack of training has been identified as one reason for poor prescribing\(^1\), with first year doctors neither confident nor competent when prescribing, by their own and their supervisor’s assessment\(^2,3\). A lack of undergraduate and postgraduate education in prescribing has been highlighted\(^4\).

The British Pharmacological Society Prescribing Initiative aims to address this, by firstly systematically reviewing the literature on educational interventions to improve prescribing, and secondly establishing a consensus on curricular outcomes needed to produce safely and effective prescribers.

Methods
MEDLINE, EMBASE, Educational Resource Information Center, British Education Index, PsycINFO, CINAHL, TIMELIT, Cochrane Trials Database and grey literature were searched. Inclusion criteria were: educational interventions to improve medical student and/or junior doctors’ prescribing, primary or secondary care settings, and publication after 1990.

For curriculum development, we undertook a purposive sampling approach to bring together a panel of UK experts in clinical pharmacology, pharmacy and medical education. A modified Delphi approach using a list of possible learning outcomes derived from the systematic review was used to produce consensus on a core curriculum.

Results
Eleven controlled and four ‘before and after’ trials were identified by the review. Ten controlled trials showed improvements in written or clinical scenarios, but one study showed no effect on real-life prescription errors. Only the WHO Good Prescribing Guide has been tested in a variety of settings and students. All four ‘before and after’ trials reported significant improvements in written or clinical tests. However, most studies had methodological flaws.

For the Delphi panel, 28 of 48 experts approached agreed to take part (58%). Twenty-six replies were received in response to the 28 which were sent out (93%). Twenty-one experts responded to round 2 (81%).

The systematic review results were used to produce a list of 53 learning outcomes. A further nine outcomes were suggested by panellists. Fifty outcomes were selected.

Conclusions
There is only moderate evidence to inform medical schools about how to prepare medical students for the challenges of prescribing. The WHO good prescribing guide is the only model that has been widely used and shown to improve prescribing. While it is based on sound principles, there is a need for further development. To this end, a consensus on 50 learning outcomes which should be included in the BPS Core Curriculum for Prescribing has been reached. Further development of the curriculum will now be undertaken.

References
Using and understanding behaviour change communication within clinical practice: A qualitative investigation of medical trainees and general practitioners

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Background
Healthcare professionals are increasingly confronted with illness associated with lifestyle choices such as smoking, alcohol and substance use, sexual health, diet and exercise. Lifestyle related illnesses contribute significantly to NHS spending and are increasing, yet the behaviours that cause and maintain these health problems are notoriously difficult to change. Communication training is now a core feature of all UK medical undergraduate programmes. However, whilst an evidence-base exists as to what psychological techniques are effective in changing patients’ behaviour, these do not commonly feature within training programmes. Moreover, recent research reveals that undergraduate communication training inadequately equips graduates for this growing clinical challenge. Within primary care, doctors encounter many behaviour change opportunities and the NHS introduced targets such as the Quality and Outcome Framework (QOF) to encourage GPs to engage in lifestyle management, yet research suggests that these incentives are inadequate to address the problem. It remains unknown what behaviour change strategies medical trainees do develop, and what hinders their use in clinical practice.

Method
A qualitative study explored i) what behaviour change strategies are being used in primary care and how these skills are acquired, and ii) what facilitators/barriers enable/prevent trainees from implementing behaviour change techniques into practice. Semi-structured in-depth interviews were conducted with a purposive sample of 12 medical practitioners at a range of stages of their training (undergraduate and postgraduate). Analysis was conducted in parallel with data generation, taking a grounded approach. Thematic categories arising in initial interviews were explored subsequently and disconfirmatory evidence was sought until thematic saturation arose.

Results
Findings reveal that medical trainees and practitioners consider behaviour change to be a fundamental part of medical practice, yet one they feel untrained in. Participants had developed a wide range of strategies through experiential learning, but were unconvinced of their efficacy. Further barriers to implementing behaviour change included the uncertainty over whose responsibility it was, lack of incentives, and desire to protect the doctor-patient relationship.

Conclusion
Current communication training is inadequate to equip medical practitioners to motivate behaviour change. Barriers arise from doctor-patient interactions as well as the context of primary care. Thus the development of specific training in behaviour change management is required in order to address barriers and training needs identified. Further implications of findings for undergraduate and postgraduate medical training are discussed.

References
Teaching and Learning
Introduction
Portfolios are used in many ways in both undergraduate and postgraduate medicine. Currently students at the University of Aberdeen do not create a portfolio, although structured reflective writing is undertaken as part of the Regent scheme. A Personal and Professional Development (PPD) portfolio is planned as part of a new undergraduate curriculum. The aim of this study was to survey student views about the introduction of such a portfolio.

Methods
Ethics permission for the study was granted by the North-East of Scotland Research Ethics Committee.

Four focus groups were held in July and August 2008. The same semi-structured discussion guide was used for all groups. This was developed through a literature review. All focus groups were taped and transcribed verbatim (after being anonymised). The transcriptions were analysed for content-related themes, using framework analysis.

Results
Of 53 students available at the time of the project, 32 participated in the focus groups. Analysis of the transcripts from these groups identified five themes: current related experiences; views on reflection; benefits of the portfolio; practicalities; and assessment. For example, the focus groups highlighted the need for a clear explanation of the purpose of the portfolio, and the reflective learning component of the portfolio. Students could see potential benefits of a portfolio, but felt that these would need to be made very explicit. It was important to the students that practicalities such as timing and format received careful consideration, ensuring that these are tailored to students' needs and take into consideration their other commitments.

Conclusions
This exercise has produced important information about student's perspectives on the introduction of a new PPD portfolio. While some of these relate to local issues, there are elements which echo the literature and may inform similar developments at other medical schools.
How medical students learn law: an exploration of the teaching, learning and assessment of law in UK medical schools

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Legal and ethical responsibilities of professionals must be defined and contextualised within service shifts, increasing patient involvement, workforce reconfiguration and ‘reprofessionalisation’ of the health and social care workforce. Research funded by a National Teaching Fellowship compares teaching, learning and assessment of law in medical and social work education, exploring perceptions of law relating to medical practice, the impact of curricular interventions and models of ‘professional identity’. This paper reports the 2008/9 medical education results as well as preliminary results from a literature review and national Practice Survey of UK medical schools’ law curricula, funded by the HEA Subject Centres for Legal Education (UKCLE) and Medicine, Dentistry and Veterinary Medicine (MEDEV).

The NTFS study of 1st, 2nd and final year medical students at four medical schools reveals varying perceptions and understanding of the law and its application in practice. Students’ perceive: law as positive; that a sound understanding of the law is essential to being a good doctor; law promotes accountability of doctors for their practice; law can be used by doctors to achieve health improvements; law protects vulnerable people and meets their needs, and law generally endorses and supports medical values. Students express anxiety about keeping up-to-date with and applying legal knowledge and believe that the law encourages defensive medical practice. Knowledge of legal powers, duties and case law and skills for practising law are perceived as low.

Conclusions

This study raises issues around how we ensure that graduates are equipped to apply law in practice. We examine the nature and pedagogy of law teaching and how law is conceptualised in medical curricula, including knowledge and understanding; legal rules; concepts; constructs, and skills needed to apply the law in a range of complex clinical situations. Results confirm concerns raised in other studies. Professional codes of practice are enshrined in a legal framework. Inconsistencies in teaching, learning and assessment of law coupled with differences in the way other health/social care professions ‘learn law’ and resulting varying positions regarding service user advocacy, rights and professional role, have implications for interprofessional practice1,2. Historically, medical students learn law alongside ethics3, in an opportunistic way in clinical placements or law learning is assumed to be acquired in postgraduate specialty training 4. Development of medical professional identity requires understanding of responsibilities and possibilities within a legal framework. However, the ‘law’ is not overtly, consistently or systematically included in the development of professional identity or professionalism5,6.

References

What Do Students Understand by Research, and can they Identify Research Skill Developmental Opportunities within Curricular Choices?

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Northern Medical Schools Student Selected Components (SSC) Consortium, Universities of Leeds1, Hull-York Medical School2, Sheffield3, Liverpool4, Newcastle-upon-Tyne5

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The Northern Medical Schools SSC consortium has undertaken a MedEv funded research project evaluating opportunities to develop research skills within the undergraduate curriculum. Focus groups were held in 5 medical schools (Leeds, Newcastle, Hull-York, Sheffield and Liverpool) with students in the year before graduation, exploring their views on curricular opportunities to develop research skills. A hierarchical questioning technique was used probing both individual experiences (including perceived opportunities to develop research skills, the range of projects selected, and skill developments to date) and their understanding of what comprised ‘research’. Group discussions were transcribed and systematic thematic analysis undertaken searching for awareness and identification of opportunities for research experiences.

This revealed agreement between student groups about the perceived importance of developing ‘research’ skills for their future careers, and many described actively searching for such opportunities within curricular choices. However, there were differing perspectives between schools on the availability of research experiences within their curriculum, and differing local motivational influences.

To explore further students’ understanding of the skills involved in research, an additional study was undertaken inviting 3 students from each school to identify projects likely to offer research skills development from a menu of projects collated from all 5 schools. Students initially worked alone, and open discussion of results revealed significant differences and confusion in individual perceptions of what constituted “research”, and the research opportunities offered within these projects. Examples of student quotes include “it’s all new knowledge to me, so it's research”…… “Critical analysis is a clinical skill and not a research skill’…… and “audit is research”.

This individual lack of clarity and often frank misunderstanding was predominantly eliminated after an educational intervention providing verbal and written information about the different skills components and tasks that comprised research1,2. Some differences of perceptions between schools persisted, and may reflect differing institutional experiences. Clear, concise descriptors of content, skill developmental opportunities and ability of students to influence these are essential for informed curricular choice. A key intervention to facilitate appropriate and informed choice would appear to be addressing the knowledge gap between staff and students’ understanding of what constitutes research and the skill components therein.

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2. Student-Selected Components In The Undergraduate Medical Curriculum: A Multi-Institutional Consensus On Assessable Key Tasks. Medical Teacher 2005 27 (8) 720-725
A comparison of student opinion on the use of mind maps and concept maps as a method of learning rheumatology

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Background
A Concept map (CM) is a diagram drawn to answer a question by demonstrating relationships between selected key words (concepts). Concepts are organised from the top of a page into hierarchies then cross-linked together demonstrating higher understanding. CMs can be used as a learning tool for medical students. A Mind map (MM) is a less formal diagram drawn from a central idea that is ‘exploded’ outwards on a page using key words or diagrams with less emphasis on relational organisation. MMs may also be an effective method of assisting medical student learning.

Aim
To compare student opinion on mind mapping and concept mapping as a method of learning rheumatology.

Method
Third year medical students attended an 8 week rheumatology attachment at Weston General Hospital or at Gloucester Royal Hospital. The first block of 10 students were taught concept mapping in a 60 minute tutorial by facilitators with an interest in medical education, then given 20 minutes to answer the question ‘what is arthritis’ by drawing a CM. Students were then encouraged to use the technique to learn topics during their attachment. At the end of their attachment the students were asked to re-draw their maps before giving written feedback. A second block of 9 students attending the same attachment used the MM technique, after a shorter five minute instruction.

Results
CM feedback was largely negative, 9/10 students found the technique ‘not helpful’. MM feedback was more positive, 8/9 students found the technique ‘useful’ or ‘very useful’.

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<tr>
<th>Student and Facilitator Feedback</th>
<th>Concept Map</th>
<th>Mind Map</th>
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<tbody>
<tr>
<td>Time taken for instruction</td>
<td>60 minutes</td>
<td>5 minutes</td>
</tr>
<tr>
<td>Positive student opinions</td>
<td>‘Helps categorise knowledge’</td>
<td>‘Helps categorise’</td>
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<tr>
<td></td>
<td>‘Helps consolidate learning’</td>
<td>‘Good for overview, categorise’</td>
</tr>
<tr>
<td>Negative student opinions</td>
<td>‘Too hard to construct’</td>
<td>‘Unable to put detail’</td>
</tr>
<tr>
<td></td>
<td>‘Time consuming ’</td>
<td>‘I’m not a picture person- lists are easier’</td>
</tr>
<tr>
<td>Student opinion on future use</td>
<td>‘I won’t use it- too formal’</td>
<td>‘Useful to apply to other conditions.’</td>
</tr>
<tr>
<td></td>
<td>‘I’d prefer to use mind maps’</td>
<td>‘Would be useful to apply to other areas of learning’</td>
</tr>
<tr>
<td>Facilitator opinions</td>
<td>‘Complex for facilitator to understand, hence my students found them difficult’</td>
<td>‘Quick to explain technique and intuitive to students’</td>
</tr>
</tbody>
</table>

Discussion
In this small comparison students and facilitators found concept mapping to be complex to teach and learn, compromising further uptake of the technique. Mind mapping was easier to teach and learn and students perceived similar benefits to those of concept mapping.

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Healthcare professionals’ views and experiences of safe prescribing: a qualitative study

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Prescribing of medicines was traditionally the remit of doctors and dentists alone. There has been a recent drive to improve the access of patients to medication, with other healthcare professionals, such as pharmacists and nurses, becoming independent and supplementary prescribers¹. Despite an emphasis on reducing prescribing errors through models of good prescribing practice², prescribing errors that have clinically significant outcomes still occur in 0.3-39.1% of prescriptions³.

A sample of practitioners from four healthcare professions, Pharmacy (n=3), Medicine (n= 5), Nursing (n=4), and Dentistry (n= 2) (total n=14) who had responsibility as independent prescribers, were interviewed to explore their views and experiences of safe prescribing and prescribing errors. Each group of healthcare professionals had individuals who worked in either the primary or secondary care setting.

We asked the following research questions:
• Are there differences in views related to safe prescribing amongst different professionals?
• What is the awareness of the role of different professionals in ensuring safe prescribing?
• What are the processes involved in decision-making related to prescribing?
• Why do prescribing errors happen and how may they be avoided?

The interviews were audio-taped and transcribed. Transcripts were analysed using framework analysis. Five themes each containing several sub themes emerged from the data. These overarching themes encompassed: personal awareness, types of error and consequence, risk management, communication and education. All of the healthcare professions highlighted the need for appropriate and effective training in prescribing to protect the patient and the profession.

This paper will discuss these themes in detail. The use of these themes to design educational interventions to train students and doctors on safe prescribing will be highlighted.

References
Reflective Learning in Medical Education: A Strategy to Enhance Undergraduate Obstetric Experience

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Background
Active involvement on a labour ward is a requirement of the GMC in undergraduate medical education\(^1\). However, the extent of labour ward experience and the learning outcomes to be gained from it are not explicitly defined by the GMC or the Royal College of Obstetricians and Gynaecologists\(^1,2\). Experience may be limited by time, opportunity and competition with student midwives. Despite this, learning outcomes can only be achieved on the ward as child birth requires an understanding not only of basic physiology and anatomy, but also of good communication, professional conduct and an ability to cope with uncertainty. A strategy which might augment ward-based teaching, thus achieving good personal development and comprehension of the birthing process, is to encourage students to formally reflect upon their ward experience. Self reflection is widely used in the education of allied health professionals. It seems ideally suited to achieve personal development regarding medical student attitudes, rather than procedural knowledge. However, few studies have researched its use in medical education.

Objective
The aim of this study is to evaluate the use of self reflection to enhance undergraduate medical student labour ward experience.

Methods
Twenty fourth-year medical students were invited to participate while on clinical rotation at the University of Aberdeen. During their attachment to labour ward, students were asked to keep a reflective journal based on the Marks-Maran model\(^3\). Once journals were completed, students met in groups of 2-3 for peer reflection. These sessions were attended by Specialist Registrars in Obstetrics and a facilitator. The hypothesis that written and group reflection would enhance ward-based teaching was tested by face and construct validity questionnaires.

Results
Most students reported that keeping a reflective journal was useful, whereas every participating student and registrar reported that group reflection was useful. The pooling of experiences in group sessions was rated as especially useful as students could not only share their reflections, but also learn from each other’s experiences. Overall, 80% of students and 100% of registrars agreed that reflection, generally, was an effective strategy to maximise the training value of relatively few deliveries observed.

Conclusions
Self reflection requires few ward resources, and it is an effective teaching strategy that can be used, particularly in small groups, to augment ward-based teaching, thus offsetting other time and resource constraints. It appears to be particularly beneficial in promoting an understanding of good communication and professional conduct during child birth.

References
Do foundation year one doctors make effective tutors for medical students? Evaluation of a foundation year one led peer-to-peer teaching programme.

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Introduction
We present findings from a 16 month programme of foundation year one (FY1) teaching to fourth year medical students in cardiology, between 14/9/07 and 18/12/08. The aim of our programme was to provide focused, lecture-based teaching in cardiology, thus supplementing the formal cardiology placement which ran concomitantly with our programme. We believe that FY1 tutors are able to utilise their own recent experience of finals preparation to provide effective and useful teaching of medical students.

Methods
FY1 doctors were openly invited to participate as tutors. An initial meeting with tutors highlighted the aims of the programme and what topics would be covered. Tutors ranked their choice of topics, and an attempt to allocate according to preference was made. The programme consisted of six weekly lectures and an end-of-block assessment. Students were provided with a workbook with lecture print-outs. Students were asked to grade the content of the lecture, quality of the lecturer and usefulness of the lecture using a scale between 1-5 (5 being excellent and 1 being poor). Data were analysed with the T-test using SPSS 16.00 (Chicago, Illinois, USA).

Results
A total of 26 FY1 doctors and 155 students participated, with 118 students sitting the exam. An average of 4.7 out of 6 sessions were attended by each student. The average pass mark was 81%. A trend was seen for a higher pass mark in students who attended at least 4 sessions (n=102), compared to those who had attended 3 or less (n=16) (80.0% [range: 52-96] and 72.2% [range: 39-96] respectively (p=0.036 [95% CI: 0.57-15.1]). 70.4% of students graded the usefulness of the sessions as excellent, 55% graded the quality of the lecturer as excellent and 47.7% graded the content of the lecture as excellent.

Discussion
The overwhelming feedback to our programme is extremely favourable and demonstrates that FY1 doctors do make effective tutors for medical students. This is evidenced by the high level of attendance and positive feedback, in particular regarding the usefulness of the lectures. The benefit is mutual, with FY1 doctors having the opportunity to develop presentation skills, learn from feedback and provide documented evidence for their PDP. Further testament of our success is seen from the award of the 2007-2008 Deeney prize for medical education. Our model of FY1 teaching medical students can be transferred to other specialities as a useful adjunct to clinical teaching, benefiting students and tutors alike.
Underperformance
The Experience of Medical students Classified as Unsatisfactory at Finals Study

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Introduction

Research into medical students who “struggle” has traditionally focused on identifying risk factors that better predict individuals earlier in their undergraduate career. These are broadly divided into academic, personal and professional factors based on Faculty interpretation and classification. “At risk” students may then be targeted with additional resources to prevent a potential perpetual cycle of failure1.

However, students who do not regard themselves as weak, or who view various external factors as influencing their examination performance2, may not be open to supportive interventions. Relatively little is known about what these students feel about being identified as being at risk of failing and their change in attitude or behaviour for the remainder of the course. There may be a number of reasons as to why they may not engage with support. This study aims to gain insight into how students who have failed their final exams experienced “struggling” and contextualise the findings with regard to views of staff who are involved in providing support, and students who have managed to overcome difficulties. The results will inform responses to improve support for students.

Methods of data collection

Semi-structured interviews to explore the experience of students undergoing remediation after being classified as unsatisfactory at their Final Professional Examination will be undertaken. Three focus groups will also be conducted: students undergoing remediation; staff involved in student support and students who failed their Intermediate Professional Examination but subsequently passed the re-sit. The findings of this work will be used to inform development of a questionnaire that will be given to junior medical students to explore their perceptions of being identified as potentially at risk of failing.

Methods of data analysis

Interpretative phenomenological analysis (IPA) will be used to analyse the semi-structured interviews. A constant comparative method used in the grounded theory approach will be used to analyse the data generated from the focus groups.

Results

The results of the interviews and focus group with students undergoing remediation will be available for the conference. This data will give a rich insight into the commonalities and individual differences in the experiences of students who are struggling.

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Arts and Humanities
Addressing the elephant in the room: a partnership approach to medical humanities teaching in the undergraduate curriculum

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Background
There is increasing demand for medical school curricula to cover “human” qualities essential to good practice, such as empathy, advanced communication skills and team working. The medical humanities have much to contribute to this, but integrating humanities into the curriculum is a challenge for academics in medical education and clinician educators who may be sceptical about relevance.

Students can be resistant to ideas they suspect might be superfluous or ‘woolly’, and experts may feel defensive of their own disciplines in a new field. How can medical humanities be delivered in a way that overcomes disciplinary differences and provides clear clinical relevance?

Work done
We describe the establishment of an innovative medical humanities curriculum at one of the new UK medical schools. We chart development from an academic-led discipline to an integrative curriculum theme staffed by a collaborative team of academic/artists/clinician and student/patient ‘partners’. We illustrate experiences of collaborative planning, resulting in an innovative and popular portfolio of plenaries, workshops and extra-curricular activities. We also discuss an assessment strategy for this curriculum theme.

Conclusions
Taking into account multi-professional interaction, and the practical realities of teaching humanities to medical students, we outline the challenges and benefits of adopting a collaborative approach. We emphasize particularly the importance of balancing rigorous theoretical underpinnings with clinical relevance and testing the impact of our efforts with appropriate assessment methods.

Take home messages
The integration of academic and clinical staff with artists, students and patients in curriculum development is initially challenging but highly beneficial to professional development. It is invaluable in helping staff and students critically to explore subjective, creative and ‘humane’ aspects of their medical learning, knowledge and practice.
Assessment
The need for all health care staff to practice professionally, treating patients with respect and recognising diversity is firmly embedded in modern practice and in society. In recognition of the need for culturally competent patient care, undergraduate and postgraduate curricula for health professionals within the UK now have an increased focus in this area. Recent years have seen a significant increase in published studies describing formal teaching of cultural competence. However, instances where cultural/diversity issues are formally assessed within training programmes are more rare. From the perspective that assessment drives learning, and that the engagement of trainees during equality and diversity training can be challenging, we have designed and implemented a cultural competence programme for postgraduate Vocational Dental Practitioners (VDPs) within Scotland that includes a formal OSCE assessment using standardised patients.

Vocational Dental Practitioners (N=71) from the West of Scotland VDP Schemes were recruited to the cultural competence pilot. This study involved 1.5 days training (implemented during their study day programme during August and December 2008) followed by an assessment of four standardised patient scenarios using an OSCE format (March 2009). VDPs (N=24) from the North of Scotland, who did not receive the training, also undertook the assessment, as a negative control group.

The first part of this study involved the development of a comprehensive competency blueprint for the training. The resulting document is a matrix, representing the standard 6 strands of diversity (race, religion, sexual orientation, gender, age, and disability) in addition to another strand representing socially deprived patients. Across each of these strands, competencies were identified in the areas of ‘negative assumptions’, ‘language & communication’, ‘courtesy & respect’, ‘avoiding discrimination’, ‘clinical issues (dental)’ ‘legislation’, ‘leadership & management’ and ‘access issues’. The competency matrix was developed in consultation with (and validated by) diversity groups.

The training was designed to be as interactive as possible, with relatively small groups of trainees rotating through workshops which were lead by members of the community representing different strands of diversity. This included individuals with learning difficulties and other disabilities, a member of the transgender alliance, individuals from ethnic minorities and representatives from different religions.

The cultural competence matrix, evaluation data from the training and a comparison of performance during the assessment between different groups of trainees will be presented to demonstrate the effectiveness of this intervention.
The New Patient Assessment Questionnaire – Does it offer enhanced utility?

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As part of a national system of assessment designed to address all-round competence, vocational dental practitioners (VDPs) in Scotland must use a validated instrument - the patient assessment questionnaire (PAQ) - to provide evidence of their inter-personal skills. Not only does the PAQ provide insight into the skills of individual dentists, it also yields valuable information on how patients perceive this aspect of the service as a whole.

Having been used successfully for several years, the PAQ is now undergoing further development in an attempt to further enhance its utility. Our research has shown that the existing PAQ was able to yield sufficiently reliable scores to allow identification of outliers for remedial training\(^1\). However, as is generally the case with assessment tools based on patient feedback, the ratings given tend to be concentrated at the high end of the scale which limits the level of detailed information available to feedback to the assessees. If the reliability and discriminatory capability of the PAQ scores could be increased this could potentially enhance the quality of feedback given to VDPs and their trainers, in turn improving the educational impact of the assessment tool. The PAQ could also be an ideal vehicle in which to monitor equality and diversity issues from the patients’ perspective.

With these aims in mind, to address the issues of reliability and educational impact the rating scale was expanded for the new PAQ from a five point EVGFP scale to a 10 point scale with the cut-score delineated by the descriptors unacceptable and acceptable. In order to monitor equality and diversity issues, specific questions relating to whether patients felt discriminated against in any way during their visit to the VDP were included on the form.

The new PAQ has been piloted in conjunction with the all the elements of the assessment system with VDPs throughout Scotland (n=137). Data from these pilot studies is being rigorously evaluated to determine reliability, feasibility and overall utility of this new PAQ both as a tool focusing on inter-personal aspects of the service as a whole and as a method to evaluate individual practitioners within an assessment system.

References

Cadaveric Surgery versus Anatomical Dissection: Trial of a novel approach to basic surgical skills and clinical anatomy for medical undergraduates

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Introduction
Anatomy is an essential basic principle of every undergraduate medical course and has important implications for patient safety. Changes to the anatomy act in 2006 have unlocked opportunities for new methods of learning clinically relevant anatomy; as surgical procedures may now be carried out, in full, using cadavers.

Aims
We hypothesise that by taking advantage of these changes, we can provide more purposeful and memorable ways to learn anatomy, compared to conventional teaching methods – with the added benefit of providing a valuable insight into surgery.

Methods
A group of 3rd year medical students were randomly allocated to prepare for and perform a Shoulder Hemiarthroplasty or Anatomical Dissection of the shoulder by identifying key anatomical and surgical objectives. All students took an anatomy test before and after the procedure to compare learning from the two teaching methods. Both groups also participated in focus group discussions.

Results
The Cadaver Surgery group showed better knowledge of anatomy after the procedure, with the addition of basic surgical skills acquisition.

Discussion
The initial preparation greatly enhanced students’ anatomical knowledge of the shoulder by identifying relevant anatomy during the surgical procedure itself. Uniquely the surgical nature of the project also provided undergraduate students with a platform to practice key surgical skills, principles and etiquette. It may help to improve patient safety.

Conclusion
We believe that learning anatomy via a surgical approach provides a relevant, in depth, purposeful and enjoyable learning experience and therefore could be considered for incorporation into undergraduate teaching.
The Effect of a New Theatre Etiquette course on Students’ Learning Experience in the Operating Room

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Background
A recent infection control review in NHS Tayside commented that medical students who have no formal training in theatre etiquette could pose a significant infection risk to patients undergoing total joint arthroplasty. Medical students currently have no formal teaching in scrubbing and gowning for theatre. The students report high levels of stress when they are asked to scrub and gown for theatre. We present a cohort study of the effect on students experience in theatre on the implementation of a theatre etiquette course.

Methods
We implemented a new theatre etiquette course for the medical students in which they learned scrubbing, gowning and gloving for theatre. The new theatre etiquette course was added to the end of the year 3 student timetable. Online learning material including a video was produced and also used to provide consistency in teaching. At the end of year 4, the students completed a questionnaire about their confidence and experiences in theatre. These results were compared to the year above at the same stage in their training using the same questionnaire.

Results
This paper demonstrates how 160 students can be taught theatre etiquette in one day with minimal resources and staff. It also shows that students attending the new course were more confident and had an improved experience in theatre compared to the year above them.

Conclusion
The implementation of a Theatre Etiquette Course improved students’ experience in theatre. It also outlines the need for consistent teaching from undergraduate to postgraduate level and good collaboration amongst University, Royal College, Medical staff, Nursing staff and students.

References
Assessment versus selection

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Introduction
With MMC and current application rounds now in full swing, much is being said about the selection processes for junior doctors to enter training programmes. Anecdotally trainees seem frustrated, as are those interviewing, that evidence of fulfilling competencies as part of Foundation programme e.g. communication skills are then being reassessed at interview e.g. communication skills stations.

A day long course was organised with the aim to give foundation doctors and specialist trainees an introduction to teaching. As part of the course, a session was dedicated to small group work. Each small group worked together to discuss a topic and present back to the rest of the group. To obtain direct feedback from trainees at grass roots level, one group worked on the subject of assessment versus selection.

Method
8 trainees discussed their views of the differences between assessment and selection. This was then feedback to the entire group of 24 trainees where further discussion points were noted.

Results
The group’s understanding of assessment was that this was a process of gathering proof to demonstrate achievement of a certain level of competence, and sometimes a measure of personal qualities. These could be demonstrated e.g. by work based assessments or by taking college exams. Successful achievement in these assessments implies the trainee has met the basic standard expected of them at that stage. Selection was felt to be the recruitment of an individual based on their suitability to the post. It is presumed that for an individual to be eligible to apply for a post, they must already have the basic standard of competency necessary to perform, as judged by their assessments.

The idea of an ideal interview was also discussed. It was agreed that the format should be available for the applicants in advance of the interview so that they would have an idea of what to expect. The format should be discussion based with applicants being able to demonstrate their capabilities by talking about their previous experience and showing their personal motivation. Clinical scenarios and dilemmas may be appropriate so as to demonstrate their thought processes and their personal qualities.

Conclusions
Trainees wish to be able to prepare for interviews so they can demonstrate their skills and potential. The process of selection should therefore be less about re-assessment and focus more on personal attributes and achievements that demonstrate that they are suitable for further training.
Factors influencing the choice of assessors in Work Placed Based Assessments by Foundation Trainees

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Introduction
Workplace based assessments (WBA) are a compulsory part of the foundation training process. The purpose of these assessments is to provide feedback on various curricula competencies and to identify trainees who are having difficulty.

The quality of the assessment is likely to depend on the relationship between assessor and trainee. Trainees are responsible for initiating assessments and choosing assessor. Little literature exists exploring the reasons behind the choice of a particular assessor.

Method
A questionnaire was distributed to Foundation year 1 and 2 (FY1&2) trainees. Trainees were asked to score the importance of 6 factors that could motivate choosing a particular assessor for WBAs during their current training post.

Results
A total of 94 questionnaires were completed. 73.4% (69/94) were completed by FY1 doctors and 26.6% (25/94) by FY2 doctors.

Increasing score (out of 5) for a particular factor indicates increasing importance for that factor when a trainee is choosing an assessor.

The data showed that trainees’ choice of assessor is influenced by the following factors in descending order of importance (95% CI shown in brackets):

1. The perceived friendliness of the assessor – Mean 4.1 (4.0 – 4.2)
2. Whether you know the assessor – Mean 3.7 (3.5 – 3.9) (n=93)
3. Availability and accessibility of the assessor – Mean 3.5 (3.2 – 3.7) (n=93)
4. The seniority of the assessor – Mean 3.4 (3.2 – 3.6)
5. It is perceived that the assessor gives good marks – Mean 3.1 (2.9 – 3.3)
6. Whether the assessor has had training in the use of the assessment tools – Mean 2.6 (2.4 – 2.8)

Subsets of the data showed that perceived friendliness of assessor was also the most important factor for both FY1 (Mean 4.0, 95% CI 3.9 – 4.2) and FY2 (Mean 4.3, 4.1 – 4.5) doctors as well as for doctors currently working in a medical specialty (Mean 4.1, 3.9 – 4.3) and a surgical specialty (Mean 4.1, 3.9 – 4.3).

Discussion
These preliminary results suggest that there are various factors influencing choice of assessor. In this cohort the most important factor is the perceived friendliness of the assessor.

Accessibility and availability of assessors is a recurring difficulty. This factor is likely to become increasingly problematic as there is an ever increasing cohort of trainees from medical student through to registrar who have to complete these assessments.

Further work is needed to fully explore the reasons behind choice of assessor so that the feedback and learning aspects of WBAs can be improved.
Students’ Views on Peer Assessment & Professionalism: Knowing When to “Switch It On”

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Introduction
Peer assessment is defined as the process of cohort members judging the extent to which their peers exhibit specific actions. These can be traits, behaviours or achievements. Peers witness routine behaviour, rather than the modified or cautious behaviour often displayed when classmates are being directly observed, thus giving a unique perspective. Peer assessment is utilised in undergraduate assessment of professionalism. Professionalism is subjective, not easily defined, nor quantified. There are numerous professional guidelines issued to students when they commence their studies, for example the GMC’s ‘Good Medical Practice’ and ‘The Duties of a Doctor’. How much understanding students have of these guidelines, and their perceived relevance, is little known. This study determined how undergraduate medical students perceived professionalism and explored their views on peer nomination as an assessment tool for measuring professionalism.

Methods
Ethical approval was granted by the university’s sub-committee. Participants received information sheets and consented for data acquisition, storage and dissemination. 12 undergraduate medical students participated in focus groups after completing a peer nomination assessment. Focus groups were recorded and transcribed verbatim. Transcripts were coded using a grounded theory approach. Open coding was done by all authors independently, and axial and selective coding was conducted with negotiation.

Results
Two main themes clearly emerged; students’ perceptions of how professionalism relates to them and students’ views of the design of a peer assessment tool. Theme 1; professionalism, the key subthemes were perceptions of attributes of professionalism, (ir)relevance of professionalism to students and teaching & learning of professionalism. Theme 2; peer assessment, the 5 subthemes which emerged were the use of an online environment for voting, eliminating anonymity, receiving prior warning, opportunity to justify choices and participation promoting reflection.

Conclusions
Students appear to know that professionalism should be shown in an academic situation; however, they feel that as students they should be able to “get away with it”. Thus, students regard professionalism as only being relevant in a clinical context, and call for leniency in preclinical years, going against the guidance from Good Medical Practice. Students are accepting of peer nomination as an assessment tool for measuring professionalism in undergraduate medical students; preferring this to be conducted online, with the opportunity to justify their decisions. Students report peer assessment as a driver for reflection on their own behaviour.

This study will be expanded to include Durham University's current cohort and students at the University of Liverpool.

References
Developing a Formative OSCE (FOSCE) with Immediate Feedback for First Year Medical and Dental Students

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Many medical schools use the OSCE as the main method of assessing clinical skills from first year to final year. Immediate feedback on OSCE performance has always been considered important however, it is difficult to deliver in a summative OSCE especially to less experienced students. Staff at QUB have designed a method of introducing year one students to the concept and actual experience of an OSCE assessment during semester one. This assessment was also piloted as a mechanism for providing immediate feedback to students on performance of the key skills they had acquired during the semester.

Following a review of Year One Semester One, student contact time in the Clinical Skills Education Centre was increased; a formative OSCE with immediate feedback was used to measure student competence in clinical skills. Two sessions were planned, 175 students took the exam on each occasion. All students received feedback on 3 different stations.

The logistics and planning required to implement a formative OSCE with immediate feedback for junior students is exacting. Details about station content, marking schemes and the feedback protocol will be outlined. Student focus group data and examiner evaluation suggests that the formative OSCE was highly valued by 81% Examiners and 80% students; immediate feedback being appreciated and thought acceptable, and feasible, more by students than by experienced examiners. 60% examiners thought immediate feedback during an OSCE may be distracting as opposed to only 1% students.

FOSCEs can alleviate stress in 1st year students. Immediate feedback is beneficial and can usually only be delivered in a formative fashion for the best results. Like the development of the TOSBA which is thought of as ‘a valuable bedside assessment and teaching tool’ we feel we have developed a process which will benefit first year students.

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Pass/fail decisions consistency and score reliability

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Introduction
Several factors affect planning for numbers of OSCE stations, including projected or measured reliability. However, reliability results are often calculated scores of an entire cohort of candidates, yet often we actually want maximum consistency around the pass/fail decision threshold.

Research question
How can measures of pass/fail decision consistency be calculated and how do these and score reliability change as the number of stations is increased?

Methods
Fifth year medical students at University of Otago sit a 10 station OSCE. For each station the pass threshold is calculated by borderline regression and the stations are aggregated by compensation. For all combinations of increasing numbers of stations: mean $\alpha$ of student scores, mean equivalence and $\kappa$ of pass/fail decisions; and mean number of students outside 1 SE(d) of the pass threshold were calculated.

Results
For 2 stations the mean $\alpha$ was 0.40 rising to 0.77 for 10 stations. For the equivalence of pass/fail decisions this increase was 0.9 to 0.99 and for $\kappa$ this increase was from 0.49 to 0.79. The % outside the 1SE(d) boundary of the pass threshold increased from 78% to 94%. These factors changed at different rates. Although $\alpha$ continued to rise, equivalence, kappa and proportion outside 1 SE(d) rose faster and plateaued to a greater extent after 6 stations. From 6 to 10 stations the equivalence was maintained at 98% and the number outside 1SE(d) of threshold maintained at 91-94%.

Discussion
Despite a reliable examination for candidates overall, the pass/fail decision for a proportion of students can remain uncertain despite addition of extra stations. For additional stations the number close to the score threshold and number of changing decisions alters less than the score reliability, This implies that we are just increasing the score reliability of students about whom the decision is unchanging.

Conclusions
Rather than just calculating reliability of all stations and all students, the use of proportions outside 1SE(d) of threshold and equivalence and $\kappa$ of pass/fail decisions as a measure of decision consistency adds to information on assessment reliability. Even for assessments with additional stations used to increase score reliability there may be a significant number of students close to the decision point whose pass/fail decisions continue to remain uncertain.
A Critique of the Specialty Certificate Examinations of the Federation of Royal Colleges of Physicians of the UK

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The Federation of Royal Colleges of Physicians of the UK has developed a programme of Specialty Certificate Examinations; a compulsory component of assessment for Certificate of Completion of Training (CCT)\(^1\). It forms part of a suite of assessment tools which include the clinical assessments miniCEX and DOPS.

This critique is based on publicly available information on websites of the RCP including the Joint Committee on Higher Medical Training report of the Pilot project\(^2\) and uses the characteristics of a good assessment system\(^3\) of validity, reliability, educational impact, cost effectiveness, and acceptability together with standard setting.

The Pilot did not report on validity directly. Curriculum documents blueprint outcomes of each course to the examination modes (Specialist Examination, mini-CEX etc.) but it is not clear how well a particular paper samples content. The division of outcomes into knowledge, skills and attitudes makes this problematic. The Pilot provides some evidence on construct validity because a mix of clinicians took part from SpR1 to consultant. Senior doctors tended to perform better than juniors but improvements were modest ranging from 5.9 percentage points in geriatrics to 12.4 in neurology over the whole training period. This may be unsurprising if expertise does not depend much on knowledge or reasoning skills but on wide experience\(^4\).

Use of knowledge-based examinations runs counter to the widely accepted principle of Miller that assessment systems which test ‘shows how’ and ‘does’ are more appropriate than ‘knows’ and ‘knows how’ for professionals at later stages of training.

The Pilot calculated the number of questions that would be necessary to reach acceptable reliability (Cronbach’s alpha >0.8) as 200, now used for the main examinations. Candidates work to examinations so the educational impact should be to promote the learning expected. Knowledge examinations can have perverse effects if the aim is to identify competent clinicians but here is as yet no significant information on educational impact of the examination. The Pilot did not formally address the question of costs but they appear to have been substantial; mainly in terms of consultant time for question writing and standard setting. Much will depend on the number of new questions required each year.

Of feedback comments from candidates in the Pilot, about one-quarter were broadly positive and the rest broadly negative. It may become more acceptable when more familiar.

The Anghoff was used to standard set three of the specialties in the Pilot although difficulties were encountered in the identification the ‘borderline candidate’. This may have been behind the pass mark being variously set at 83% in cardiology (4.8% pass rate) to 57% in neurology (84.5% pass rate).

In summary reasonable reliability can be achieved but validity is more of a problem. Educational impact, cost effectiveness, and acceptability require more evidence. Standard setting is difficult.

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Examiner Performance Feedback (PERFORCE): is it a useful tool for examiners?

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Aim
To investigate the views of examiners on whether Examiner Performance Feedback (PERFORCE) is a useful tool.

Background and Methods
Since June 2007, the Royal College of Paediatrics and Child Health has been providing examiners with feedback on their performance with regard to the MRCPCH Clinical Exam. Including a range of data, this analysis is sent in letter format to examiners after each clinical examination diet, providing them with some statistical data enabling them to review and calibrate their scoring over time. Examiners are provided with means and standard deviations of the marks they awarded, along with comparison data of other examiners; data on whether they are marking stringently or leniently (displayed as a ‘Hawk-Dove Index’ (HDI)) and data indicating whether they are able to rank candidates’ performance and discriminate between well and poorly performing candidates. Examiners at the June 2008 examination were sent a questionnaire asking for their views on PERFORCE. Both qualitative and quantitative data were described.

Results
Data from 64 examiners was obtained (80% response rate). Most had examined the clinical exam between 5 and 10 times. There was no significant difference between examiners perceptions of their examining style before and after the feedback ($t=0.638; df=63; p=0.50$); whilst 50% felt that they wouldn't change their marking style as a result of the feedback, 95% agreed that the feedback was both clearly set out, and was helpful in assessing their performance as an examiner. 78% of examiners found the mean and standard deviation data useful. The majority of examiners (87%) agreed that the HDI was easy to understand and was a helpful statistic (90%). Examiners also agreed that the discriminative ability data was easy to understand (68%) and that it was a helpful tool (84%). Qualitatively, examiners noted that they found the discriminative ability (n=22) and HDI data (n=20) most useful; they also commented that they felt the feedback could be enhanced by graphical representations of the data (n=10). 95% of examiners felt that the PERFORCE was a good way of assessing their performance.

Conclusion
The PERFORCE feedback is deemed as a useful tool by almost all examiners, with the majority agreeing that each set of data provided was both easy to understand and helpful. It is a novel way of monitoring their performance as examiners; the benefits will only increase over time as examiners and the College will be able to identify patterns in their marking which they can then begin to work on through examiner training. This is of particular benefit to the college examinations, assisting in the goal of ensuring examiners mark consistently and accurately. The researchers recognise the need for further development of the tool in terms of more visual representations where graphical form is sought.
Effectiveness of interventions to teach and assess intimate examination skills: evidence from a systematic review

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Intimate examinations are inherently difficult to teach and assess. This is because in real world settings, learning of these skills may be influenced by anxiety and embarrassment for both learners and the patients. In addition, cultural and ethnic influences underpinning approaches to these sensitive examinations and time pressures in clinical settings may result in a reduction in learning opportunities for medical students and health care professionals.

This is a systematic review of articles reporting teaching and assessment of intimate examination skills. For the purpose of this review intimate examinations included pelvic, rectal, testicular and breast examinations. A systematic search of the major databases including MEDLINE, EMBASE, ERIC and BIDS was carried out from the start of the databases to July 2008. Primary empirical studies in English reporting teaching and/or assessment of intimate examination skills were included.

A total of 85 articles were included in the review. A narrative analysis was carried out to answer the following research questions:

What are the methods for teaching and assessment of intimate examination skills?

How effective are the methods of teaching and assessment of these skills?

What are the psychometric properties of the assessment tools used to assess intimate examination skills?

How have the issues related to the ethics of teaching/assessment of intimate examinations and the emotional or psychological impact of such training been addressed?

This paper will integrate the evidence on teaching and assessment of intimate examination skills and make recommendations for best evidence medical education practice and areas of future research in this important area.
Peer, tutor and self review in Problem Based Learning (PBL)

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Background
Current GMC Fitness to Practice Guidance emphasises that medical students should be provided with opportunities to practice the standards expected of them (GMC, 2007). Current medical education literature emphasises the importance of assessment, reflection and self awareness in learning (Papinczak et al, 2007). At the University of Liverpool students and tutors are asked to evaluate student performance in PBL for reflection. Currently there are no structured mechanisms for peer review as part of this process.

Summary of work
In addition to being evaluated by their tutor and evaluating themselves, second year medical students were asked to review a member of their PBL group using the existing PBL evaluation criteria. Written guidance was provided for tutors and students about the purpose and process of the peer review component and how results would be fed back. Students were then invited to participate in an online survey about their experience of the exercise.

Summary of results
Tutor, self and peer reviews of PBL performance were completed for 281 students. Differences between the overall scores achieved statistical significance (>0.001), and only peer and tutor scores correlated, albeit weakly. In addition 145 students completed an anonymous online survey about the exercise. Most respondents agreed they were comfortable reviewing a peer (51%) and that PBL was a good place to practice peer review (53%). Most (89%) agreed that they had been honest in their peer review. Students reported concerns about anonymity, problems with the administration of the peer review and the feedback of peer review results.

Conclusion and future results
Triangulating information from tutor, peer and self evaluation appeared generally useful for students and tutors in formative reflection. Whilst most students appeared to engage honestly and constructively with peer review, a minority remained unconvinced about its place/role/purpose. Some students had not received the results of their peer review at the time of the evaluation survey, fostering cynicism in some about the process. Tutors and students needed more background information about peer review and more guidance about its purpose and delivery, including feedback. An online system for submitting peer reviews would ensure anonymity in future.

References
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Does Peer and Self-Assessment Correlate to the use of the Conscientiousness Index Tool when Evaluating Professionalism in Medical Students?

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Background

Peer assessment is defined as assessment by ‘individuals who have attained to same general level of training or expertise, exercise no formal authority over each other, and share the same hierarchical status in an institution’¹.

The ‘Conscientiousness Index’ (CI) has previously been used within UDQC, to provide an assessment of pre-clinical medical students’ professionalism. The Conscientiousness Index is an objective, scalar measure of student professionalism. Points are awarded to students continuously throughout the academic year for attendance, submission of assignments and any voluntary actions. Points can be deducted for unprofessional behaviour, at faculty discretion.

Our previous studies have shown a significant correlation between professionalism as measured by the CI and peer assessment. This correlation was only at the negative behaviour end of the spectrum. Additionally, students were concerned about not having adequate knowledge of their cohort and thus felt unable to accurately assessment.

The study aims to ascertain whether there is any correlation between students’ perceptions of peer professionalism and views of their own professionalism and, levels of professionalism as measured by faculty using the conscientiousness index. We wish to see whether greater familiarity with peers enhances the correlation between professionalism as measured by CI and peer assessment, and whether peer assessment could be utilised to measure professionalism during the pre-clinical years of the undergraduate medical curriculum.

Method

Year 1 & 2 undergraduate medical students are invited to participate. Students will be given an anonymous histogram showing the distribution of the CI points for their cohort. They will anonymously identify the students within their PPD group that best fits their idea of most professional and least professional. Students are asked to identify these extremes as the CI only discriminates between these. Students will also identify where on the CI distribution they view these students, as well as themselves and the rest of the students in their tutor group, to fall.

Literature suggests that peer assessment is improved by the number of assessors (all students in the group will assess each other) and the number of observations (students spend 6 hours a week within their tutor groups, on top of normal contact time)¹.²

Rankings will be produced for those nominated as most and least professional. The student peer rankings will be compared to their measured rankings from the Conscientiousness Index to ascertain any statistical correlation between student perceptions of professionalism and faculty assessed levels of professionalism.

References

Patient Safety Education and Workplace Assessment for International Medical Graduates

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Background
This study is funded by the Department of Human Services. It is recognised that IMGs while not a homogenous group, are a key component of the future Australian Medical workforce. There is limited research on the role of International Medical Graduates (IMGs) and patient safety. Poor performance may occur for a variety of reasons. One area consistently ignored in investigations of performance is that of patient safety in the workplace. The goal of this project is to develop, trial and validate an integrated set of workplace-based patient safety assessments which includes a Patient Safety Performance Profiling Tool (PSPPT), and a composite assessment package for IMGs and Junior Doctors and, potentially, other health professionals.

Methods
The tool is based on the National Patient Safety Education Framework (Walton et al, 2006) and is mapped against both national and internationally validated frameworks. The study comprises three stages:
Stage 1: Development of Workplace-based Assessment Methods and Approaches on Patient Safety;
Stage 2: Application of Patient Safety Performance Profile Tool (PSPPT) workplace-based assessment package, data analysis and write-up;
Stage 3: Evaluation of Patient Safety Performance Profile Tool (PSPPT) workplace-based assessment package, data analysis and write-up.

This paper will focus on the developmental stage which is based on the work completed to date including a thorough literature review on patient safety education and assessment at individual, team and organisational levels and the engagement of approximately 50 key stakeholders from regulatory, educational and health care organisations across the State of Victoria. The purpose of the Patient Safety Education Think Tank for IMGs was to lead the development of a coordinated state-wide approach to IMG issues around patient safety.

Results
The Think Tank focused on key issues around patient safety surrounding IMGs. It was wide-ranging discussion in its scope providing participants an opportunity to interact with each other to enable a cross-fertilisation of ideas. It is the first step in leading the development of a coordinated state-wide approach to patient safety education and assessment on ‘what is happening’ and ‘what should happen’ on the utilisation of workplace assessment on patient safety and its systemic effects.

Discussion and conclusion
IMG education and training is of significant interest to a number of key players. Consequently a patient safety education think tank was convened to engage key stakeholders from the medical profession, clinicians and IMGs, educationalists, and policy makers. These results will be presented as an informative Australian case study on the development of patient safety education and workplace assessment processes.

Reference
Reliability of the use of a diagnostic assessment tool in relation to the performance of foundation doctors using a simulated ward exercise

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Introduction
Patient safety is essential for the delivery of high quality healthcare and there is increasing demands for explicit evidence of foundation doctors' fitness to practice1. This paper shares the reliability results of the use of a diagnostic assessment tool with a sample of foundation doctors in a simulated ward exercise.

Background
The ward simulation exercise has been designed to carry out a diagnostic assessment of foundation doctors' professional behaviours in a simulated healthcare environment. Each exercise is structured around core elements of an admission requiring clerking, an acute event and a communication issue. These are interspersed with a number of timed interruptions which increase in intensity towards the end of the 20 minute exercise. The ward simulation exercise has been described in relation to foundation competences in terms of its evaluation by participants2 and its realism3. It can provide additional evidence of performance in a number of areas including prioritization, team-working, communication, and decision-making. The development of a diagnostic assessment tool has already been shared4.

Methodology
A convenience sample of 37 foundation doctors currently undertaking their FY 1 posts in the teaching hospital in 2007 were invited to participate in one exercise. Each participant was assessed by 3 independent assessors who received a written briefing and a diagnostic assessment tool for each participant. Each sheet had two versions of the diagnostic assessment tool. In the first, assessors had to mark each of the 37 items on a 7 point Likert scale and in the second the assessor gave an overall global judgement for each of the 7 items on a 7 point scale.

Results
Complete data was only available for 22 participants and 3 assessors. The overall reliability of the test was carried out using generalisability theory (GENOVA). The reliability G coefficient for 3 rates demonstrated poor internal consistency at 0.3 for the 37 item version but was 0.64 for the 7 item version.

Conclusions
There were several limitations identified in this study. However the 7 item version is approaching acceptable levels of reliability. The small sample size and the nature of the sample may have biased the results. The self selected group of participants were not unsurprisingly at the top end of the performance scale. In addition, the briefing of the assessors may not have been adequate. Changes both to the process and the diagnostic assessment tool will be shared to enhance its use as evidence of competence in doctors identified in the workplace as having difficulties.

References
Simulated Cases as a Predictor of Assessed Clinical Skills

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Objective
An influx of computer-based patient simulations are being used at all levels of training in medical education. The premise is these cases allow learners to improve clinical reasoning skills in a structured format. However, few studies have been done to determine if simulations improve clinical skills.

Hypothesis
Increased use of simulated cases may enhance performance on a structured oral examination.

Methods
As part of the paediatrics clerkship at the University of Nebraska Medical Center (UNMC), approximately one-third of the students are assigned to a private clinic in locations throughout the state of Nebraska (CP) every 8-weeks. The other students rotate through various services at UNMC. During 2006 to 2008, junior medical students (n=217) were required to maintain a core experience log documenting either direct patient experiences or completing a corresponding Computer-assisted Learning in Pediatrics Program (CLIPP) case. For accreditation standards, students also maintain a patient log required by the College of Medicine (COM). Students conduct a structured patient interview on the last day of the clerkship over some general pediatric problem, such as cough, fever, etc. Statistical analyses were conducted to determine what measured variables provide the best predictor for oral exam results.

Results
Data collected is from a normal distribution, verified by Shapiro-Wilks' W test (W>0.8). Correlation analyses were conducted to identify a relationship between oral exam scores with average time spent on CLIPP cases, total completed CLIPP cases, core experience log patients, or college of medicine’s patient log. These findings were not significant for any measured variables. Stepwise regression analyses were conducted based on site (CP versus UNMC) and time of year students completed the clerkship to determine the best predictor of oral exam performance. Interestingly, the more CLIPP cases completed, CP students’ oral exam scores in two rotations improved (Rotation 1: \( r=0.739, p<0.05 \); Rotation 5: \( r=0.657, p<0.05 \)). For UNMC students, COM patient log totals were the better predictor for student performance on the oral exam (Rotation 5: \( r=0.400, p<0.05 \)).

Conclusions
The CLIPP cases are used to ensure students receive similar exposure to pediatric problems. Although a useful means of standardizing experiences, in only two rotations did total CLIPP cases completed have a relationship with exam scores. Although these cases are helpful for students, they have not translated to applied clinical skills.
Basic Science Education
Early clinical contact for pre-medical students

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We are carrying out action research to answer the question “How does the introduction of early clinical experience improve the learning experience of the pre-medical student?”

The literature has shown that early clinical contact improves students’ social interactions with patients and communication skills. It gives them context for their scientific learning and allows them to have glimpses into their future. This leads to deeper learning and therefore better retention and learning in context gives better retrieval.

In our institution the pre-medical and pre-dental students come from a range of backgrounds and are taught basic sciences to prepare them for the medical course. It had been noted that on course evaluations that the pre-dental students enjoyed and appreciated their 12 week clinical and anatomy taster sessions and that the pre-medical students would like something similar.

An equivalent course is planned to give the medical students some clinical activity and extra small group dissection. We will make use of the geriatric population in secondary care and encourage discussion and reflection based around broad topics rather than the use of formal medical communication formats. We would hope some students will be able to form a relationship with the same patient throughout the 6 weeks and some meet different patients. The clinical component will be facilitated by 5th year medical students.

These clinical sessions will be followed by reflective sessions facilitated by Juliette King to help the students clarify what they have learnt.

The students will be expected to follow this with a reflective case study of one of the patients they had met concentrating on one issue.

Evaluations of the previous course for the last two years have shown that the pre-medical students feel disenfranchised from the medical school and are not sure if they are scientists or medics. The course will be introduced as part of the curriculum and will be evaluated formally at the end of the year by questionnaire. It will also be evaluated by focus group at the end of the course for tutors, fifth year facilitators and students. We will look at motivation, value changes, development of professionalism and the doctor patient relationship.

As part of our triangulation we have contacted other UK universities who offer a premedical year most of whom do not support early clinical inclusion.

Conclusion

Early clinical contact reduces disenfranchisement of pre-medical students and improves their contextual learning thus helping the complete learning experience.
Evaluation of the Self-reported Working Patterns and Health of Third Year Medical Students

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Background
Undergraduate medical education is characterised by high workload and stress-related ill health amongst learners particularly at the transition period between basic science and clinical training¹. Often these studies have been cross-sectional surveys²,³.

Objectives
To collect cohort data on self-reported workloads, health and issues in the affective domain amongst medical students in a traditional curriculum facing high stakes summative examinations at this transition period.

Methods
The innovative aspects of this study included the gathering of questionnaire data from twelve students weekly in the four weeks prior to the examination followed by a one-to-one semi-structured interview one month after the examination.

Results
12 out of 300 students volunteered to participate. As the hours of work increased so physical, mental and social health declined. 50% of participants considered the declines in health were acceptable while the rest deplored these effects. Few turned to support from formal tutors relying on family and friends.

Conclusions
Other researchers have identified the decline in health domains correlated with the rise in workload¹,², and separately, the low values placed on tutor support³,⁴. Our new findings include the fluctuations in the health domains over the four week period before the examinations and one month afterwards. Also the acceptability or deplorability dichotomy in this small group of volunteers was an unexpected finding. These issues require further work for validation and reliability inquiries.

Inducing illness in students should not be condoned and other areas for our further research include investigating personal profiles, learning styles and coping strategies and their prediction of fluctuations in health that could be ameliorated by targeted support even from formal tutors.

This study was conceived and conducted by one author (LMJ) as a student selected component, self-generated, with the mentorship of the other author (IJR) and both of us wrote this abstract.

References
Can Anatomy teaching translate into practice?
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Background
Anatomy teaching has a vital role in training medical students for the future. Although PBL is a popular and well established educational format for undergraduate medical teaching, classroom teaching can supplement experiential learning.

Summary of work
A traditional classroom teaching format was adopted and delivered to 30 second year medical students, over a 4 week course. A post course questionnaire was undertaken and the results anonymised. Qualitative data was collated to identify 4 key areas:

• Application of teaching to practice
• Role of the anatomy teacher
• Role of the basic science teacher in teaching
• Supporting anatomy teaching within the clinical placement

Summary of results

<table>
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<th>Application</th>
<th>Approximately half the students had used their anatomy teaching post course, the majority within PBL sessions</th>
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| Role of the anatomy teacher | All respondents expressed the positive effects of the teacher and her ability to:  
  • Clarify concepts  
  • Translate 2-d diagrams into usable knowledge  
  • Excellent use of handouts |
| Role of the clinician in placements | Links were made to other disciplines i.e. physiology and pathology, examples were given relating knowledge to clinical cases |
| Supporting learning within the placement | Students identified structured learning as essential to work based learning |

Conclusions
Classroom teaching in anatomy appears to support clinical teaching and learning within clinical placements. The PBL format appeared to be a common method of incorporating classroom teaching following this anatomy course. The role of the anatomy teacher is a strong factor in its success. This would indicate there remains a role for this method of teaching in the undergraduate medical curriculum.

Take-home messages
Students exposed to ‘classroom’ or traditional anatomy teaching, appear to benefit from this type of teaching. Traditional teaching methods may support a blended method of curriculum delivery in purely PBL courses.
Clinical Skills
ECG Interpretation Skills: a survey of Psychiatry Junior doctors

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Aims and Methods
We explored the ability of psychiatric junior doctors to identify common ECG abnormalities. Subjects were directly approached at three London sites during induction or teaching programs.

Results
The survey had a total response rate of 65% (36/55). Psychiatry junior doctors appeared highly competent in detecting whether an ECG is grossly abnormal (overall success rate of 97%), but were less competent in specifying exact ECG diagnoses (success rate of 41%). Accuracy rates for some diagnoses (e.g. Paced rhythm) fell to as low as 11%.

Clinical implications
There is little consensus about minimum acceptable standards in medical skills such as ECG reporting in junior doctors. These competencies are generally ignored in new curriculums. Questions regarding the appropriate remit of psychiatry doctors in this area are raised and the need for more monitoring and education of these skills is queried.
Aligning clinical resources to curriculum needs: the utility of three hospitals attached to a new medical school

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Abstract
The substantial rise in UK medical student numbers has meant that curriculum delivery is increasingly occurring outside the customary teaching hospital environment.

District general hospitals are now, more than ever, imperative in the training of doctors. Teaching at DGH sites has been well received by medical students in terms of quality and friendliness of teaching. However, do DGH sites offer the same opportunities in terms of patient availability and range of clinical encounters sufficiently enough to meet the curricula objectives?

Methods
Over a two day period data was collected from one teaching hospital and two DGHs that serve the clinical education at a new UK medical school. Senior nursing staff were approached to ascertain patient availability for medical student learning at that time. The reasons for non-availability were recorded, as were the Patient ID numbers of available patients. The hospital information systems then provided ICD-10 data on diagnoses at discharge. Data were analysed to describe why patients are unavailable for student learning and the relevance of the diagnostic data to curriculum requirements, with comparison between the different hospitals.

Results
The proportion of patients available, mean patient age and patient gender ratio were similar at each of the three hospitals.

The larger, more academic hospital provided the highest proportion of Index clinical problems which more closely match curricula objectives. DGHs offered a lower proportion of curricula specific index clinical problems. However, DGHs offered a wider range of generalised clinical problems for student learning. These included less acute, less complex, non curricula specific clinical encounters.

Opportunities to participate in clinical skills were limited in all three hospitals. None of the hospitals appeared to provide sufficient clinical material to meet all learning needs of the curriculum.

Conclusions
Both the larger academic and the smaller District General Hospitals appear to provide sufficient potential patient encounters for medical students.

Although District General Hospitals offer a wider range of generalised clinical problems, the teaching hospital appears to more closely match the curricula objectives for students. Availability to practice clinical skills is insufficient to meet the competencies expected of a graduate, and requires further evaluation.

As acute health care delivery models change, medical schools may have to be quite deliberate in their utilisation of academic hospitals, community hospitals and primary care, matching student allocations carefully to sources of relevant learning opportunities.
Communicating with Confused Elderly Patients: an innovative teaching session for medical students

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Introduction
Clinical communication skills are an essential part of medical practice. This is recognised by the GMC1. It has been shown that teaching of communication skills improves patient health outcomes2. Approximately half of all hospital inpatients aged 65 or over have dementia, delirium or both3. Communication with confused elderly patients may be challenging however, it is possible and worthwhile4. Trainees and students in Geriatric Medicine at Yale perceived deficits in their communication skills, particularly with cognitively impaired patients5. Despite an extensive clinical communication component in the curriculum, there is currently no specific teaching on communication with confused, elderly patients at St George’s. A new teaching session was researched, written and run as a pilot, with student evaluation.

Methods
Fourth-year students in geriatric medicine took part in the two hour session. It included discussion of experiences and analysis of video clips leading to identification of principles of communication with confused elderly patients. This was followed by a task in pairs, on the wards with a confused patient, then feedback to the group about the challenges faced and strategies for overcoming them. A questionnaire was completed by students before and after the session. This included ratings of their confidence in aspects of communication with confused patients.

Results
Eleven students participated in the training session. Wilcoxon signed rank test revealed that students reported an increase in their confidence in taking a history from an elderly patient with dementia and acute physical illness (z = 3.02, p = .003), in examining a patient with delirium (z = 2.74, p = .006) and in helping a confused agitated patient on the wards (z = 2.76, p = .006) following the session. Students’ comments about the session were overwhelmingly positive.

Conclusion
From this pilot, the session appears to significantly improve students’ confidence in communicating with confused elderly patients. It will be evaluated with more groups including 2nd year students by June 2009.

References
The Effect of Computer Based Video Instruction in Orthopaedic Higher Surgical Trainees

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Objectives
To establish the effectiveness of computer based video instruction (CBVI) on the self-directed learning of complex technical skills in higher surgical trainees (HSTs) in orthopaedic surgery.

Methods
19 HSTs were randomised into two equal groups for three bench model skills sessions. Both groups received an instructional manual describing a given surgical technical technique two weeks prior to the session. One group was also given a CBVI to enhance their self-directed learning prior to the session. Both groups were then assessed at the practical skills session on their ability to perform the procedure using a procedure specific Objective Structured Assessment of Technical Skill form (OSAT) and a Global Rating Scale (GRS).

Results
There was no statistical difference between the two groups in either the OSATs or GRS in any of the sessions.

Conclusions
The lack of statistical difference between the two groups can possibly be explained by the fact that the CBVI may help the learner to conceptualise the procedure. As this group of learners have prior surgical experience, an educational tool that aids conceptualisation will have a less profound impact than CBVI on a novice learner. It may be that the benefits gained from the CBVI were more subtle than in novice learners as the majority of the HSTs scored highly in the practical skills examination, and we suggest further within medium studies or qualitative research regarding how the CBVI aided the learners.
Development of a Clinical Skills Workshop in Psychiatry

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Background
Changes in mental health care are resulting in fewer opportunities for medical students to acquire psychiatric skills by interviewing patients. The traditional forum for this is inpatient wards, but psychiatric inpatient numbers are reducing year on year\(^1\), whilst medical student numbers increase\(^2\). Further, given the rise of home treatment teams, admissions are brief and only for the most acutely unwell and at risk patients.

Feedback from undergraduates at Warwick has consistently highlighted a concern that students lack the opportunity to observe and be observed by senior psychiatrists interviewing patients.

The use of simulated patients in “clinical skills laboratories” has focused on teaching practical skills and on teaching “softer” aspects of medicine such as communication skills. Reports of simulators used to acquire specific psychiatric skills and knowledge are limited. An example is using a simulated patient in a lecture setting to teach mental state examination in schizophrenia\(^3\).

We describe the development of a workshop that will be offered to all undergraduates, intended to parallel the use of clinical skills laboratories in other specialities. It will use simulated patients in a small group setting. It addresses the wishes of undergraduates to have focused tutorial time with senior clinicians based on clinical encounters, whilst acknowledging the difficulties in providing such activity using actual patients.

Method
Simulated patient scenarios have been developed for six key skills. Groups of four students rotate through half-hourly sessions concentrating on each of the skills. One student attempts a short, focused interview. The tutor and simulator offer feedback. The tutor demonstrates a part of the interview him or herself. Finally, a second student either attempts the task again, or reports the patient’s mental state based on their observations, with further feedback at the end.

Simulators and tutors are currently being trained for a pilot workshop, taking place in February 2009. The purpose of this is to test the validity of the model in the eyes of students and tutors so that adjustments can be made to the structure and content prior to its wider introduction.

Results
Students, tutors and simulators will complete questionnaires to evaluate the exercise. Further qualitative feedback will be solicited via discussion groups held with the participants.

A report of the success (or otherwise) of the workshop will be available by the time of presentation, along with the results of feedback received.

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Employing students’ multilingualism and language diversity in teaching and learning

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Background
Cultural diversity and development of cultural competence are ongoing themes in undergraduate medical education\textsuperscript{1,2}. Despite this (and despite the wealth of medical education research), few studies have considered how doctors can be prepared to meet the needs of a diverse local population\textsuperscript{3}.

Objectives
- To document the languages spoken by students at Hull York Medical School
- To make use of students’ multilingualism and linguistic diversity in curriculum delivery
- To explore how cultural competence and linguistic diversity interrelate with medical education and practice

Method and Results
In preparation for consultation skills teaching on interpreting, we conducted an annual survey of languages spoken by students on admission, in 2006, 2007 and 2008. From a total of 435 replies out of a possible 465 (a response rate of 94%), this survey revealed that 120 (28%) of the students are fluent/advanced speakers of language(s) other than English, with one student speaking four other languages, eight speaking three other languages, and 20 speaking two other languages to a fluent/advanced level. A total of 48 languages other than English are spoken.

This linguistic diversity is employed in our innovative clinical skills session, ‘Interpreting in consultations’. The session brings together first and second year students who speak the same language other than English, to role-play a consultation involving an interpreter. Our e-mail discussions with tutors and students following the session show that using different languages serves multiple, valuable purposes, highlighting, for example: issues encountered with interpreters; challenges of ‘medical’ language; difficulties in transmitting a patient centred approach; how subtleties of language and culture are lost in translation.

Discussion and Conclusions
Our survey indicates considerable linguistic diversity amongst medical students. However, this diversity is not used to its full potential: the single clinical skills session we have reported suggests there is much more to be gained. Moreover, the education we design and deliver may fail to recognise what patient-centredness means in different languages and cultures.

Despite the value of students' linguistic knowledge and the significance attached to cultural diversity there has been little documentation of the issues involved. Future research should: consider how to make best use of multiculturalism and linguistic diversity; explore how students’ awareness of, and competence in, different languages and cultures can be developed and maintained; investigate to what extent the distribution of languages spoken by medical students reflects diversity in the UK population as a whole.

References
Evaluating the educational impact of Direct Observed Procedural Skills (DOPS) on year 5 medical students

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Introduction
There are several challenges in assessing healthcare professionals in ensuring they are fit for practice with many medical graduates reporting being unprepared to start work (Cave et al 2007). With changes in both healthcare delivery and professional roles (DOH 2002) there is an increasing requirement to provide evidence of fitness to practice to ensure standards of care are delivered to patients. In terms of procedural skills, Tomorrows Doctors (GMC 2003) have clearly identified a number of skills graduates should be competent in at the time of graduation. The challenge lies in agreeing on what competence looks like in practice, and how it can be measured. This paper shares an evaluation of the impact of an assessment tool with year 5 students.

Background
There is evidence to suggest that supervisor evaluations in the past have been unreliable. (Turnbull et al 1998) and several reports have identified a lack of rigorous testing of procedural clinical skills (Sidhu et al 2004). The Direct Observed Procedural Skills (DOPS) has been implemented at postgraduate level in medicine and has been designed specifically for the assessment of procedural skills (Darzi and Mackay 2001).

Methodology
Participants and use of DOPS
A convenience sample of final year medical students will be assessed in relation to a number of procedural skills on their practice placements in a simulated setting using the DOPS assessment tool.

Design of the evaluation tool
A semi structured questionnaire using a Likert scale with a series of open ended questions will be completed by participating students both after the clinical skills session and DOPS assessment. This will be repeated 6 weeks later to identify how their practice has been influenced. Structured student focus groups will be held 8 weeks after the skills assessment to explore barriers and perceptions of the quality of performance in the workplace in relation to implementing standards of practice for procedural skills using DOPS.

Results
The analysis of the two questionnaires and themes from the focus groups will be used to identify the impact as perceived by learners of the use of DOPS in providing evidence of competence.

Conclusion
There are many different approaches taken to the assessment of procedural skills. This paper will provide some insights into the challenges and benefits of using DOPS with final year medical students.

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An Audit of Hospital Prescribing – Implications for Education

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Background
There is concern about the prescribing abilities of doctors, shared by doctors themselves1,2. Adverse drug reactions cost the NHS £466m/yr and cause 250,000 admissions annually3. The implications of poor prescribing are grave. The Medical Schools’ Council has stated that doctors must be able to choose the right drug and write a legal prescription4.

Aim
To determine ability of doctors to choose drugs and write prescriptions correctly.

Method
A pilot sample of 200 prescriptions was audited against standards based on those of Sheffield Teaching Hospitals NHS Trust. Prescription cards and medical notes were examined for evidence of drug review and the rationale behind prescribing decisions.

Results
Fifteen patients’ prescription cards generated 200 prescriptions. Two patients had no drug history recorded in the medical notes including a patient with a known penicillin allergy. Only six patients had evidence in their records of their drug history having been reviewed. Only one prescription was correctly written. Common omissions included the drug name not being written in capitals (71%) and the prescriber not being identifiable (35%). Written evidence of the rationale for new prescriptions occurred in only 56% of prescriptions. There were 20 incidences of potential drug interactions. The two prescriptions for warfarin were for patients taking drugs that might interact, including antibiotics, citalopram and sodium valproate. There were errors in the prescribing of two out of the four prescriptions for morphine.

Conclusions
Prescription writing was poor and had potential for harm. Warfarin, drugs metabolised by cytochrome P450 enzyme and strong opioids were the major problem areas. Difficulty identifying prescribers hindered provision of constructive and contemporaneous feedback. We must develop methods of teaching and assessing prescribing skills at undergraduate level and ensure optimal role models for both students and junior doctors. To help in this regard both groups in South Yorkshire now complete an e-prescribing course.

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The Impact of the Introduction of a Clinical Skills Resource Centre in an Undergraduate Medical Curriculum

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In 1996 Liverpool University reformed the MBChB programme from a traditional lecture-based course to an integrated problem-based learning curriculum. A project has been running since 2000 to evaluate this change. Focus groups were held and questionnaires distributed to the final 2 cohorts of the traditional curriculum and the first 2 cohorts from the PBL curriculum asking them to assess the relevance of their undergraduate education in the 1st postgraduate year. Questionnaires and interviews were undertaken over a three-year period with consultants and GP supervisors of Liverpool graduates gathering their views on curriculum reform. This work has recently extended, with questionnaires and interviews undertaken with the same 4 cohorts 6 years after graduation looking at the impact of curriculum reform beyond the first postgraduate year.

When the PBL course was introduced a Clinical Skills Resource Centre was established as an integral part of the curriculum. Students have weekly sessions throughout year one and have occasional sessions throughout the rest of the course including revision sessions for Objective Structured Clinical Skills Exams (OSCEs). In small groups they learn history and examination skills including the use of diagnostic and examination equipment, basic hygiene such as hand washing and practical skills such as injections. This paper summarises qualitative and quantitative data from the evaluation project pertaining to the Clinical Skills Resource Centre.

The PBL graduates, both as first year graduates and 6 years after graduation, looked back very fondly on times spent in the resource centre. They felt it gave a good grounding in history and examination techniques which they still use to this day. They also found it reassuring in the 1st year to have the centre whilst getting used to the perceived uncertain nature of PBL. The graduates from the traditional course felt they would have benefitted from the resource centre and if they had access to it their practical skills would have been better. The majority of consultants interviewed welcomed the introduction of the centre and felt it had helped improve the quality of Liverpool graduates. The questionnaire results also showed that the graduates from the PBL course felt better prepared to carry out practical skills as junior doctors.

This research suggests that clinical skills resource centres can make a valuable contribution to medical students’ acquisition of clinical skills and from the point of view of both clinical supervisors and former students can become a vital part of the curriculum.
How can unplanned simulation training prepare undergraduate medical students for transition to postgraduate trainee? UMUST, a new model of teaching

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Introduction
Preparing medical students with the skills, knowledge and behaviours to deal with emergency situations as postgraduate trainees can be very challenging due to the complexities of creating ‘real life’ experiences in artificial environments. The use of dedicated simulation facilities and high fidelity models can create the effect of the ‘real world’ environment in terms of the physical set up however it is often more difficult to reproduce the non-physical components. UMUST (Unexpected Medical Undergraduate Simulation Training) is an innovative and developmental training programme designed to create a simulated emergency experience for fourth year medical students. The unplanned simulation emergency creates a more ‘real life’ experience for the medical students.

Aims
- To create an emergency environment similar to that seen as a practising doctor
- To assess the medical student’s performance in an emergency simulation scenario
- To provide constructive feedback followed by additional focused teaching based on individual and group performance
- To encourage the importance of teamwork in emergency situations

Methodology
Fourth year medical students were randomly allocated to groups of four. All students participating had already undergone simulation resuscitation training. An emergency hospital pager was used to initiate the emergency scenario.

On arrival at the simulation facility, the students were greeted by members of the education team who facilitated a standardised simulation scenario. The students were required to assess and manage the patient within their skill and knowledge competence.

At the end of the first cohort, 14 students completed qualitative evaluation of their experiences. Three key areas were explored:
  1. Pre-scenario expectations.
  2. Experiences during the clinical simulation.

Results
The initial assessment of the data suggests that unplanned simulation training is an effective and powerful method of learning. Students reported that creating an unplanned emergency scenario had increased their ‘real life’ experience and highlighted the importance of teamwork. We have subsequently performed thematic analysis of the qualitative feedback.

Conclusion
In conclusion UMUST is a novel and effective educational tool which may have greater potential than planned simulation training to prepare undergraduate medical students for transition to real life medicine.
The potential benefits of using newly qualified nurses to promote learning and interprofessional practice within a ward simulation exercise

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Background
The benefits of a ward simulation exercise in promoting patient safety and interprofessional practice have been documented previously (Ker et al, 2006 & Ker et al, 2003). The authors wish to present the findings of an innovative pilot designed to build upon this work and maximise the opportunities for learning within a ward simulation exercise.

All 5th year medical students in Dundee have to undergo a ward simulation exercise as part of their portfolio of evidence in their final assessment. Hubert (2009, p26) states that ‘the level of realism is key to the success of the simulation session’. We wished to examine the benefits of recruiting newly qualified nurses to participate in the ward simulation exercise to increase realism and to promote interprofessional practice.

The pilot ran for eight months and was a joint collaboration between the University of Dundee and NHS Tayside Practice Education Facilitators and was based within the Clinical Skills Centre, Ninewells Hospital, Dundee.

Methods
Flying Start is a national programme that supports the transition from student to qualified practitioner through a range of activities. The nurses recruited to the pilot were undertaking Flying Start. The outcomes of the pilot were aligned with those of Flying Start. After an orientation the nurses participated in at least eight ward simulation exercises.

The nurse was assigned a mentor who undertook a feedback session at the end of each ward simulation exercise. This was led by the nurse and focussed on identifying positives from their participation in the ward simulation exercise. The feedback session allowed the nurse to identify additional training needs which were then facilitated by the Clinical Skills Centre staff.

The nurse had to create a training plan which related to their clinical practice. They then worked towards achieving this during the pilot. Following each exercise the nurse reflected on their practice to determine whether they were meeting their training plan. Following the pilot the nurses’ training log was examined and they were invited to comment further in a focus group.

Findings
Themes from the focus groups that will influence future developments within the ward simulation exercise and the professional development of newly qualified nurses will be identified and shared. Potential benefits include ensuring the transition to practice for both medical and newly qualified nurses is improved through safe yet realistic rehearsal. Challenges faced during this pilot often related to logistics in terms of time and resources.

References
Translating clinical principle to practice: A new innovation in teaching Paediatric clinical scenarios using the workshop format

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Objective
Routine clinical practice requires the integration of disparate clinical skills\(^1\). However, these skills are often taught separately. This study aims to evaluate the acceptability and advantages of using a workshop based method of learning.

Background
There has been an increased emphasis in developing and integrating communication skills in medical students alongside other clinical skills. However, these tend to be done independently with few attempts made to simulate actual events in medical teaching. There is little doubt that given the limited time in which students have to learn, a teaching method that aims to bring all these together in a single session should be explored\(^2\).

Design
A questionnaire based evaluation of learning objectives and outcomes following the workshop.

Subjects
Fifty-four 3rd and 5th year undergraduates who were rotating through the Department of Paediatrics were recruited from the University of Newcastle.

Methodology
Medical students went through 5 stations simulating three clinical problems. Each station was directly observed and a feedback sheet was filled in at the end of the individual sessions. Skills tested in each station included history taking from the parents (role play), documentation, examination of the relevant system (using a latex dummy), near patient testing and subsequently explaining the relevant findings to the parents (role play). Data were analysed using standard qualitative techniques.

Main outcome of measures
Students’ perception of the usefulness of the teaching method and whether it was better suited to their learning outcomes as compared to more traditional teaching methods.

Results
Feedback obtained following the workshop was largely positive. All the students enjoyed the workshop and felt that the method was conducive to the teaching outcome. More than half of them rated it higher in comparison to other traditional learning methods like ward based learning (53.7%), case based learning (55.6%), self directed learning (85.2%) and opportunistic sessions (70.4%).

Conclusion
The workshop model of teaching is a feasible teaching tool that can be used to integrate different clinical skills and learning objectives and can be modified to simulate different clinical scenarios.

References
Continuing Education
The Windmills™ for Medical Students session encourages students to start thinking about career management with focus on both applying to foundation training programmes and with a view to long term specialty training.

In 2005 Windmills piloted a career management workshop amongst Leicester FY doctors. This received extremely positive feedback and the scheme was later extended to all FY doctors across the Trent deanery. In August 2008, a similar workshop was piloted to all final year medical students at Leicester Medical School in one of 5 Windmills™ sessions.

Feedback was gathered from these students in questionnaire format immediately after each session. The form was comprised of 12 questions designed to evaluate the effectiveness of the sessions and permitted both quantitative and qualitative analysis. In total 191 feedback forms were received. This data was analysed to assess whether the workshop had achieved its aims, whether students had found the experience useful, and finally to determine whether a similar workshop could be implemented in the future for other medical students across the UK and beyond.

The Windmills career session was considered a success by the majority of the audience. The session appeared to fulfil its objectives of promoting career management, identifying individual prime skills and preparing for foundation programme applications.

However the feedback forms did highlight some potential problems of the course and therefore possible areas for improvement. If a similar session was run for other medical students, we feel that the following changes would be beneficial:

1. Carrying out the session at an earlier date - both to predate the applications for academic jobs and to give time to implement career planning prior to foundation applications
2. Further tools to help identify the students prime skills
3. Longer sessions or smaller group sizes enabling more discussion
4. Adequate learning environment
5. Aiming the session more directly at medical careers rather than careers in general

In conclusion, the session was very well received, achieving its aims for the majority of medical students, and as such could be beneficially implemented on a national basis.
Improving the care of the older confused hospitalised in-patient: Using the literature to inform educational approaches for liaison teams

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Background
Older people with confusion are highly prevalent on hospital wards. Unfortunately, not only is cognitive impairment under-detected by hospital staff, but the care received often falls short of the expected standard1. Increasingly, it is recognised that deficiencies in the knowledge, skills and attitudes of healthcare professionals are significant contributing factors towards the suboptimal care of older hospitalised patients with confusion. In response to these training gaps policy dictates that “Liaison Old Age Psychiatry Teams” (multidisciplinary teams of specialist nurses and doctors) deliver effective education to non psychiatric hospital clinical staff2. As yet, minimal research has been conducted into how liaison and medical teams could work together to facilitate learning.

Aim
The purpose of this study is to broadly review the literature concerning education and the older confused patient, in order to inform educational strategies for liaison teams. This forms the second stage in a research programme exploring educational approaches for liaison teams.

Methods
A comprehensive literature search was undertaken of both medical and educational databases. In addition, we looked at relevant learning and curriculum theories which could inform effective strategies.

Results
35 studies met our inclusion criteria. 13 studies evaluated the impact of staff educational interventions in relation to managing the confused older patient. Despite a high level of effectiveness in the research setting, it was unclear what the active ingredients were and importantly how easily these interventions translate into practice. A larger number of non intervention studies (22) were identified. Findings focused on knowledge gaps in relation to managing the older confused patient, diagnostic behaviours (predominantly of physicians) and experiences (predominantly of nurses) with managing patients with confusion. There were few studies which explored attitudes or learning needs of staff and even fewer organisational barriers to learning.

Conspicuous by their absence was reference to potentially relevant educational theories including work based learning, interprofessional education, social learning and advances in curriculum theories reflecting more learner centred or social reconstruction ideologies3.

Conclusions
The literature is rich at informing a content based or instrumental curriculum but deficient in findings which can develop a potentially more effective developmental curriculum4. Since there are well recognised difficulties with translating knowledge into practice due to attitudinal and organisational problems5, we argue that there is an urgent need for further research specifically exploring learning needs of all healthcare professionals in relation to managing older patients with confusion.

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Online Problem based learning in the Bond University MBBS program

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Background
Problem based learning (PBL) is the teaching and learning method used in the first seven semesters of the Bond University MBBS program. There are over 80 cases, and weekly delivery of each case consists of a 2-hour tutorial in a group of ~9 students on the Monday morning, followed by a 1 1/2-hour summary and consolidation session on the Friday afternoon. During the tutorials on-line “triggers” are sequentially released and the students discuss the content. The case-specific problem in each scenario is solved in the first tutorial and the students establish the learning outcomes for the following session. The PBL case is supported by a number of resources including lectures, laboratory and skills sessions and additional readings. The PBL tutorial develops self-directed learners in a problem-solving context (Barrows 1998). Our experience from student feedback indicates that by the time they reach Semester-5 this method of learning has become rather routine and the stimulus to learn is less intense.

The Bond curriculum is conducted over a week and allows active participation of faculty academics, external clinicians and students and captures an immediate, integrative learning experience for the students. It consists of a PBL case that stimulates initial exploration by combining small group sessions with interactive online discussions within the cohort and with appropriate interventions by faculty experts who take up various roles (unknown to the students) which are relevant to a ‘real life’ clinical setting.

Research
At Bond, in 2008, we adapted the concept of Harvard University’s Interactive Case-based Online Network (ICON) module that was developed there for medical students (Quattrochi et al 2002). The approach introduced by Bond provides a new learning environment and integrates the students’ thinking across all of the cognitive domains. It allows students to progress from interpreting vast amounts of available information to critically examining and selecting useful information, recognising discriminating findings and building a conceptual understanding of real and meaningful problems.

Evaluation of the Harvard ICON program revealed that students identified real time engagement, stronger relationships with faculty, increased accountability to the tutorial group and self-selected pace as the most beneficial characteristics. Faculty identified enhanced engagement with students and more realistic student experiences as the most beneficial characteristics (Nathoo et al 2005).

These experiences inspired the Bond MBBS program academics to pilot two real time online PBL cases in 2008 with four groups of 10 students for each case. An evaluation instrument was designed and administered to the participating students and also to a non-participating control group. Initial results revealed a high level of satisfaction with the real time engagement and supported the importance of faculty input in the learning process (Unpublished report, C. Tom, 2008). Experiences from participating faculty highlighted specific concerns relating to students’ critical thinking and deep understanding throughout the interactive process. It was also noted that the online interaction with faculty creates opportunities to identify deficits in learning for individual students and particular groups. Further online PBL experiences will be developed and implemented to address these deficits.

References
How do you teach yours? The use of single best answer questions as a teaching tool in developing data interpretation skills in medical students

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There has been a move away from true/false and extended matching questions in recent years to the use of the single best answer (SBA) format in UK medical school examinations. A SBA consists of a clinical scenario, a lead in question, followed by 5 options of which one is correct. The general consensus is that ‘knowledge, integration, synthesis, and judgement questions’ are best assessed using the SBA format which has led to numerous books and websites becoming widely available with practice questions for students preparing for exams.

A survey at Basildon Hospital (December 2008) amongst Foundation Year/Specialty trainees preparing for postgraduate examinations revealed 95% (19/20) had subscribed to such websites and 60% (12/20) used them as their sole revision tool. Our personal experiences as medical students taught us that practicing SBA questions is an important way of self-learning, particularly recognising common pitfalls in clinical practice.

We thus designed a weekly data interpretation programme for final MBBS students (UCL) on 8 week DGH placements led by specialty trainees. Data interpretation (ECG, chest x-rays, blood results etc) is a cornerstone of final MBBS and is best taught with real clinical examples, achieved by displaying SBA questions on PowerPoint slides and asking students in groups to navigate their way to the correct answer. The session lead ensures the right answer is chosen for the right reasons.

The sessions were evaluated using structured feedback questionnaires on relevance, interaction, student confidence and overall teaching standard using a 4 point scale with anchor statements between Sept-Dec 2008. Our feedback to date shows 89% (66/74) of students felt that all content was relevant (average score 3.9). 87% stated an increase in confidence in interpreting data following the teaching sessions and 99% rated the teaching as either very good or of the very highest standard.

We have shown that the SBA question format is not just an excellent assessment tool but a valid and acceptable learning tool for students. They are acquiring the analytical skills required to become competent foundation year trainees, reflecting real life scenarios they are likely to encounter. The sessions are highly interactive and the students try to justify their chosen answers to each other, creating a safe, relaxed environment in which to make mistakes and to promote reciprocal learning. We will present our full findings and how our programme can be utilised in preparing final year students.

Reference

Each year a small group of students inevitably fail their final MBBS examinations for a variety of reasons. Hays and Lawson have identified medical students with educational problems as having 'underlying issues relating to motivation, maturity, learning skills, personality and poor insight'. At UCL Medical Schools a total of 9 failed out of 373 students. Our initial survey of these students revealed they shared some of these same issues, particularly citing motivation and lack of preparation.

Traditionally these students are assigned a consultant mentor whom they would meet 3-4 times over a course of 6 months. This year they were attached to a Foundation Year 2 (FY2) mentor (as opposed to FY1 mentors who are in the same academic year and maybe treated with more apprehension) as well as a consultant.

The mentor and students had a debrief session about the final year experience, identifying precise areas of weakness and together designed a learning plan, concentrating on areas including practical/examination skills, motivation, attitude and knowledge. The FY2 then ensures that the objectives are reached with weekly meetings and liaise with the consultant mentor, flagging up any concerns he/she may have. In addition, a questionnaire is also used to identify particular concerns students have on arrival and to assess the insight students may have regarding reasons for failing.

The programme was evaluated using structured questionnaires using a 5 point scale with anchor statements and forums. Initial feedback one month into the programme reveals a high level of acceptance, rebuilding of confidence and in particular reference to the strong rapport and openness developed with mentors. On day one the average score for confidence in passing finals was 2.4; at one month it was 3.2. Students feel they have developed a good structure and routine to their revision and value the support they are receiving.

We have developed an excellent programme for re-sits tailor made to each student. Our programme is designed to identify the student’s specific needs and to help integrate them into hospital life. We believe our scheme has significant advantages in developing these students into competent, confident foundation year doctors. We will present our programme and how it was implemented, including pitfalls that were encountered, and we will present the findings for the entire academic year including data on the final pass rates and student feedback immediately pre and post finals.

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CME – “Conference Model Education” – start as you mean to go on!

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Introduction
Continuing Medical Education (CME) is defined as educational activities which serve to maintain, develop, or increase the knowledge, skills, professional performance and relationships that a physician uses to provide services for patients, the public, or the profession. This is an essential part of ongoing professional development of qualified doctors. CME takes different forms, many of which are unfamiliar to the undergraduate student. Small and large group seminars, panel discussions and workshops are commonly used in CME. The aim of this study was to evaluate the effectiveness of CME style teaching in an undergraduate medical curriculum.

Method
A novel approach to whole class Fourth year undergraduate teaching was developed using conference style teaching or “conference model education” for important topics in the areas of clinical medicine with structured seminars, workshops and breakout activities. These took place in academic half-day sessions comprising 2 days at the end of each 4 week clinical attachment.

Results
Seminars in a number of areas were developed for example; cancer care, obesity, hypertension/cardiovascular disease and seizure disorders. Each seminar had a single co-ordinator and secretariat responsible for organizing multiple healthcare disciplines and medical specialists in the given area. The format of the session included an overview of the topic followed by small group breakout sessions where students rotated and interacted with professionals in multiple disciplines involved in patient care of the medical condition. Panel discussions and debates on relevant topical issues were included where appropriate. An example is Cancer Care where the student was brought through a patient journey in breast cancer from screening, diagnostics, treatment modalities and palliation with an overview of the epidemiology of this disease. All seminars have teaching objectives and end of session feedback forms as used in CME symposia.

Conclusion
Incorporation of this conference and seminar style teaching into the undergraduate curriculum is an important way of providing intensive thematic training in key areas in medicine. It highlights the need for a multidisciplinary and interprofessional approach to the management of common chronic or complex medical conditions and has provided a vibrant forum to include the contribution of hospital managers and other personnel charged with resource allocation in the Irish healthcare system. In addition seminar style teaching prepares undergraduates for the format in which most of their future CME is imparted as qualified doctors.
The current evidence of efficacy of Surgical E-Learning

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Background
Medical education experts have emphasised for the increased use of e-learning technologies in surgical education the aim of this review was to summarise the present evidence in web-based Surgical E-Learning. Particular attention was paid to web-based tutorials, their impact on increasing the effectiveness of medical instruction and motivation of students towards self-directed learning. Most of the studies selected for the purpose of the review comprised evaluation of the web-tutorials in view of practical implementation, strengths, weaknesses, and main preferences in comparison with traditional lecture-based education.

Method and results
We searched Medline via Pub Med using MeSH terms “computer-assisted learning, surgical E-Learning, web based learning”. Literature published between 2001 and 2008 was selected for inclusion in this study. Four studies fulfilled the criteria. The method of study was a questionnaire survey in all. The response rate to surveys ranged between 65%-100%. The maximal use of Web based learning was during the last week/month prior to assessments. The use of web based Surgical learning improved the median scores between 4%-20%. The total sample size was 234. Three studies had an institution based Surgical E-Learning resource. One study used the World Wide Web for Surgical Education resource.

Conclusions
Web based education is an important tool in Surgical Education. The present literature favours the web based Surgical E-Learning. There is paucity of relevant published literature. It is an important source for retrieval of information and storage.
Experiences of a Specialist Registrar PPD group: peer group learning and development in action

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Aim
To discuss the outcomes of the first year of our SpR Professional Peer Development (PPD) group.

Background
The Royal College of Psychiatrists supports a PDP (professional development portfolio) group service for all psychiatrist members of the college. We identified this as an opportunity for a learning and development forum that we hypothesised may meet other needs such as peer support, group clinical supervision and regular review of learning objectives.

There are many models of peer working, including Balint type groups, educational groups, co-mentoring groups and research forums which we felt this framework could support. They are in keeping with adult learning theory, reflective practice and developing a foundation for continuing professional development. There are examples of the PDP and PPD that have been trialled elsewhere; most of these have been initiated by faculty or departments. This group was designed and set up by the authors and we have completed our first year of the group during a period of a most turbulent shift in medical training.

Method
The six members of the PPD group were each allocated 200 words to write about their experience of being in the group and specifically the effect on their training. A reflective practice model was used to generate this account and they were then discussed in the PPD group with common themes and ideas identified.

Results
All members of the group found it a helpful and motivational experience. Common findings were appreciation of the safe space to discuss difficult dynamics and the stimulation provided by listening to others experiences and accounting one's own. There was an acknowledgement of the importance the group had achieved as a professionally supportive construct.

Conclusions
PPD groups for psychiatric trainees may provide a robust and appropriate framework for supporting research, special interest sessions, clinical supervision and feelings of isolation and stress.
A city divided: health inequalities in Plymouth and the role of medical education

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Background
Medical schools should be socially accountable; that is they should direct their education, research and service activities towards addressing the priority health concerns of the community, region or nation that they serve (Woolard 2006). In the UK, the issue of health inequalities is centre stage and is being addressed through a Department of Health programme for action (DOH 2003). In Plymouth, a city of 260,000 people in Devon, there is a variation in life expectancy at birth of 13 years across neighbourhoods and the gap is widening (Healthy Plymouth 2008). Tackling this issue is given as the number one issue for the period 2008-2020. Clinically effective treatments are available for many of the conditions that lead to early morbidity and mortality but are apparently not being employed. Major educational needs are raised by this agenda, spanning undergraduate selection through to Continuous Professional development – highlighted in a recent DH sponsored report (Tooke 2007).

Work done
We are developing a project that brings together academics and educators, with a range of stakeholders including general practitioners, patients, communities, health service commissioners and public health. A unique data set will be used to investigate the local origins of health inequalities using coronary heart disease as an indicator. Tudor Hart’s notion of the “inverse care law” (Hart 1971) will be used as a “grand narrative” to be explored as a possible explanation for inequality. Educational initiatives will seek to address not only failures in implementation of effective treatments but also the underlying influence of social capital amongst all stakeholders (see Bourdieu 2001).

Conclusions
We will present an argument for the social accountability of medical schools and, in particular, their role in addressing the issue of health inequalities. We will describe an innovative translational research project that includes a major educational component within a city where wide variations in health occur across neighborhoods only a few miles apart.

Curriculum Planning
Providing healthcare to A8 migrant patients: perspectives from primary and secondary healthcare providers can inform medical education

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The expansion of the European Union through the accession of new member states changed patterns of migration within the UK, with a large recent influx of these “A8” migrants within the North-East of Scotland. A8 migrants share a Western biomedical culture but differences and difficulties in accessing healthcare exist. These differ from those found in traditional migrant populations.

The aim of this study was to identify healthcare staff perceptions of the barriers to providing quality healthcare to A8 migrant workers in North-East Scotland, and to establish key themes to underpin the further development of an evidence-based curriculum in migrant healthcare delivery.

Methods
This was a qualitative study using individual structured interviews with healthcare providers and support staff from primary care and various clinical specialties.

Results
Of 45 people approached in the main study, 42 agreed to be interviewed: 10 GPs, 18 hospital doctors, 15 community pharmacists; 2 community nurses, 2 midwives and 3 receptionists. Participants worked across Aberdeenshire and Moray.

The following main themes were identified as issues within the consultation with A8 migrants: time (e.g., migrant patients expect longer consultation times); language barriers and using translators (e.g., confidentiality issues with using friends or family members); cultural barriers to communication (e.g., patients describe their symptoms differently, some clinical questions are seen as inappropriate, nuances of language, including non-verbal communication lost); different expectations of healthcare (e.g., A8 patients do not understand the system of GP as gatekeeper); differences in the use of health services (e.g., a less preventative approach to healthcare); and effects on the doctor (e.g., less satisfaction with the consultation).

Discussion
The data identified cross-cultural communication themes which may inform the design and delivery of advanced communication skills teaching. Teaching students how to use Language Line before they start work was highlighted as particularly useful. It is clear from the present study that training is only one aspect of improving cross-cultural consultations: systems issues such as protected time must also be in place.

References
Final year students’ reflection of health promotion teaching and experiences: A qualitative study

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Background
The introduction of health promotion as a core component of the curriculum at Kings College London School of Medicine (KCLSM) has now been established and all final year students in this academic year will have had sessions in Years 1, 3, 4 and 5 with mixed approaches to assessment. There are similarities to the health promotion approach at Monash School of Medicine in Melbourne which has a much longer history of health promotion in the core curriculum. For the last three years we have been conducting studies at both schools to explore the impact of teaching with regard to students’ knowledge and skills, how they apply these to themselves and how well prepared they are for using the skills and knowledge in clinical practice. This paper considers the final year students at KCLSM.

Method
All final year students were invited to focus groups where a semi-structured topic guide was used by the researcher. Students were offered a choice of dates and times but the maximum would be 30. The topic guide was based on questionnaire data, discussions with colleagues at both medical schools, the stated aims of the research and the intended learning outcomes of the curriculum. The topic guide was also influenced by student feedback and assessors’ comments. The data was digitally recorded and transcribed and analysed for emerging themes.

Findings
Two broad themes emerged: the curriculum had enabled students to reflect and review their own health related issues, with opportunities to discuss and address these and, secondly, a realisation that they could be proactive and enabling of patients by learning skills and accessing intervention evidence. There were, however, concerns about inconsistencies and lack of role models in clinical teaching placements.

Discussion
Health promotion content has presented curriculum developers with many challenges yet the requirement to prepare medical students to be health promoting practitioners when qualified and to improve and maintain their own health has been highlighted by medical schools and regulatory bodies. There is some evidence that the approaches taken at KCLSM, which have similarities to Monash, are gaining credence and stimulating student interest in the field. Medical teachers may benefit from briefings about the relevance of health promotion and how to integrate it in clinical teaching. Other medical schools may find aspects of the KCLSM approach suitable to amend, adopt and integrate.
In a recent study we developed a model of learning and teaching in undergraduate medical education which differentiates components of the learner-teacher interaction including Teaching Activities, Learning Activities, and Learning and Teaching Situations. We also developed and tested a framework of Teaching Activities. The model and framework are currently being used to guide new medical educators into the literature, to help established teachers reflect on their teaching, to structure medical teacher training courses and resources, and for research. Using the model in these ways has highlighted a need to explore and define different types of Learning and Teaching Situations. These have been described in the literature by variables such as physical location (e.g. lecture theatre, library, home, laboratory or bedside) or numbers present (e.g. individual, small group and large group teaching), but no typology or comprehensive framework of these situations exists.

Three complementary research methods are being used to explore what features characterise different Learning and Teaching Situations. These are: 1) review of the literature, 2) journal analysis, and 3) focus groups interviews with educational developers, medical students and medical teachers at both the University of Edinburgh and Karolinska Institutet.

At the time of writing the project is ongoing, but a number of characteristics or 'types' of learning and teaching situations are beginning to emerge from the pilot data. Early findings suggest that it will be possible to develop a typology of Learning and Teaching Situations in undergraduate medical education. We expect such a typology to be useful in undergraduate and postgraduate teaching, faculty development and further research.

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Great Expectations: Engaging with new medical communities

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The University of Auckland delivered its inaugural regional-rural medical programme (RRMP) in New Zealand’s northernmost region in 2008, for a group of 20 Year 5 students. This involved establishing the programme at four different sites, in collaboration with the local health board, an individual health trust, primary health providers, Māori health providers and several iwi (indigenous tribes). The intended long-term aim is to grow future workforce in such regions.

The RRMP was designed to maximise the strengths of the Northland healthcare opportunities and initiatives to enhance student learning in community environments and multidisciplinary teams, while ensuring they would meet equivalent learning outcomes and common end-of-year assessments with the standard programme. The programme was designed on the ‘hub and spoke’ model that has been successfully introduced elsewhere. The ‘spokes’ allowed acculturation of students into rural community living and to learn what rural medicine entails. The principles of a symbiotic curriculum have been strongly embedded in the experience.

The NDHB Kaunihera Kaumatua (Indigenous Māori Council of Elders) provided an early symbolism of the expected depth of the community partnership with Northland, and provided the special name of Pūkawakawa to the RRMP, along with a dedicated carving. The significance of these will be explained in the presentation.

The presentation will draw on the findings from the independently-conducted evaluation that was introduced alongside the RRMP programme, particularly to highlight the extent of ‘engaged learning’ and ‘community of practice’ concepts that have been espoused in recent literature.

The presentation will highlight student engagement in the programme’s development, with the communities, both formally as part of their learning and informally through their respective involvement in social and learning events, to demonstrate their commitment to community engagement. It will also demonstrate the need for students to appreciate the difference between the good intent of providing a ‘service to communities’, which could be at odds with building a community partnership model.

In terms of measuring success, the presentation will provide examples that demonstrate how we have achieved the features regarded as essential for models of community engagement and engaged learning. Examples will be provided from a student, staff and community perspective.

References

There are many educational advantages to teaching students in a primary care setting, including illustrating the patient's own experience of their illness and care, and the variety of common conditions. Furthermore, the national increase in the numbers of patients being cared for in the community means that it is critical that the students' clinical experience is not just limited to the secondary care setting. Community based learning in general practice is now a norm of undergraduate medical education, but increased demand can bring problems of quality, and both cost and capacity can threaten its viability.

UEA's innovative MB/BS aimed to secure regular high quality learning experiences in the primary care setting for all students starting from the first year, while ensuring a viable and sustainable use of practitioner time and energy. Students are attached in groups of 10 to a general practice for each of the five years of the MB/BS, and they attend a whole day of teaching at this practice during all problem-based learning weeks. There are 1-2 tutors 100% available for teaching the students, who organise various learning activities, including seeing patients, accompanying staff in consultations, and student discussion and feedback sessions. All teaching is linked to the core case scenarios used that week, and patients with conditions appropriate to the week's learning are specifically recruited for student teaching.

This model is entirely different from the opportunistic shadowing of staff and is unusual both in its structure, group size, and match with theoretical learning. Nevertheless, the feedback has been consistently positive, with the supportive learning environment provided by both patients and staff being very much praised by students. We shall present detailed student feedback for the first five years of the course (2002 - 2007). We will provide details of the students' views about the ambience of the practice, organisation of the teaching day, conduct of clinical teaching, process of learning, clinical contact with patients, assessment and feedback, and personal attributes of the teacher. The analysis will also highlight key factors supporting this unusual and intensive model, and implications for broadening provision to other learners.
Prepared to practice? The views of F1 doctors

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Background
A small pilot study was conducted to investigate the views of first year Foundation doctors (F1) as to how well prepared they felt by their undergraduate medical training. Our aim was to build on existing evaluation data collected from UEA MB/BS students on the various aspects of the MB/BS programme, to identify any areas where recent graduates did not feel prepared to practice upon starting work.

Method
A questionnaire was developed based on Wall et al1 to ask F1 doctors how well or badly they felt their undergraduate training had prepared them for work in 43 areas.

F1 doctors at the James Paget and Norfolk & Norwich University Hospitals were asked to complete an email questionnaire during September 2008 (1 month after starting their first year of Foundation training, with 2 email reminders). All 69 doctors currently employed on F1 posts through the East Anglian Foundation School at these two hospitals were invited to take part. Thirty-one F1 doctors completed and returned the questionnaire by the deadline (45% response rate). F1 doctors at 3 other local hospitals were invited to participate, but unfortunately interest was low.

Results
21 respondents were from UEA; 9 of the remaining students were from other UK medical schools, and 1 was from overseas. 58% of the respondents were female and their age ranged from 23-42 years.

Generally the students had only felt moderately or slightly confident in their knowledge and skills when they started their F1 jobs. But they did feel that their experiences at medical school had prepared them well for the jobs they had undertaken so far (74% agree or strongly agree). The results suggested that F1 doctors felt less prepared for coping with responsibility, stress and uncertainty than communicating with patients and colleagues, team-working, history taking and examination, and understanding the wider context of the patient’s condition. The F1 doctors also felt relatively less prepared for decision-making, treatment and prescribing. Full details of all the areas in which F1 doctors felt more or less prepared will be provided in the poster.

Further work
A further wave of data collection will be conducted at the end of the F1 year (summer 2009). Following this, recommendations will be made to the MB/BS curriculum development team as to areas where medical students need to be better prepared.

Reference
Medical students’ feedback preferences

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The first cohort of students at the new Medical School at the University of East Anglia started the MB/BS in September 2002 and graduated in July 2007. As a new medical school, considerable time and effort has been put into collecting student feedback on their teaching and learning experiences, to ensure that through our curriculum we are delivering the optimal educational experience.

Students are required to complete a compulsory End of Year Evaluation at the end of each academic year. This comprises several sections to cover all aspects of the MB/BS, and includes the DREEM\(^1\). Student responses to DREEM items “The teachers provide constructive criticism here” and, in particular, “The teachers are good at providing feedback to students” have been consistently poor. Changes in the format and content of feedback, particularly following assessments, provided to students have been made over time. However, the students still express dissatisfaction about this area. Response from our first graduates to items concerning feedback in the “Assessment and Feedback” section of the 2007 National Student Survey also indicated that this was still an area of weakness.

Further changes to how and what feedback students receive have been implemented for 2008/9, on the basis of staff views about student feedback needs. We wanted to check that the proposed changes matched up with student views, and to identify any other areas of weakness that could also be dealt with before the new system was finalised. Consequently, we included two open-ended questions in the 2007/8 End of Year Evaluation to identify what useful feedback the students had received that year, and what feedback they would like to receive in the future.

Full details of the analysis of student comments will be presented. To summarise: student responses indicated that the most useful feedback had come from PBL and GP Tutors via the formal reports these members of MB/BS staff complete for each student at the end of the module. Feedback on some of the assessments - including their SSS (Student Selected Studies) presentations and OSCEs (Objective Structured Clinical Examinations) had also been useful. But almost all students wanted more detailed feedback, particularly about where they had gone wrong. Individual, descriptive (rather than just ticks in boxes or pass/fail), prompt feedback was desired. Problems in the assessment feedback system, where students arrange to visit their Personal Advisors to get more detailed feedback after obtaining their pass/fail status, were also identified.

References

Lessons Learned from the Implementation of Problem-Based Learning at a Traditional and a New Medical School

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The last 30 years has seen a rapid growth in the use of problem-based learning (PBL) to educate undergraduate medical students. Although its forms are many and varied, PBL has been generally used to develop the self-directed and life-long learning skills believed to be essential to the medical school graduate.

However, despite its popularity with medical schools in regions such as Canada, the United States and the United Kingdom, there has been a distinct lack of research into the issues medical schools have faced in trying to either transition into PBL from a traditional lecture-based curriculum, or to implement a PBL program from a school’s inception.

This historical comparative case study of two English medical schools was conducted as part of the authors’ doctoral research at the University of Calgary (Canada). The University of Liverpool transitioned from the traditional lecture-based model of teaching to PBL in 1996, and the University of East Anglia (UEA) started their medical school using PBL in 2002.

Major issues associated with the implementation of a PBL-based undergraduate medical school curriculum were common to both UEA and Liverpool. Matters having to do with staff and student adjustment to a new way of learning seemed to be the most prominent and significant issues at both schools. Extending the PBL ethos into teaching hospitals was an ongoing concern for both schools in this study. Also, creating the required infrastructure for small-group learning was an issue at both the established and newly created medical school.

In addition to the above, this poster presentation will outline some of the ongoing concerns surrounding the implementation of new curricula at UEA and Liverpool that were specific to each institution, predicated on the differences in the history of each programme.

References
Mandin et al., and the University of Calgary medical school faculty, developed and implemented a unique undergraduate medical curriculum. This curriculum promotes inductive reasoning skills used by residents and integrates basic and clinical sciences into 120-125 clinical presentations (CP). Each CP is presented as a scheme that progressively leads to diagnosis or decision. The CP curriculum has been adopted by a number of medical schools throughout the world, including the School of Osteopathic Medicine in Arizona (SOMA). SOMA enrolled its inaugural class in 2007. Unique to SOMA is the need to deliver significant portions of the CP curriculum to students at a distance from the campus. In partnership with EssentialTalk (Calgary, Canada), SOMA developed and utilised an educational delivery system (EDS) designed to enhance the implementation of the CP curriculum for these students. The EDS (MedicalLearningOnline.com) can be accessed online and is password protected. This EDS visually displays each CP scheme and links learners to requisite basic and clinical science knowledge appropriate at each node within the scheme. This is accomplished with tabbed panels next to each node of the CP scheme and includes an overview of the node topic, a clinical worksheet, and specific objectives tied to learning exercises that facilitate mastery of this information. Learning exercises were directly incorporated into the EDS and included reading assignments, narrated video presentations, web links, etc. In several instances, faculty members created short presentations that were recorded and streamed as part of specific learning exercises.

An appropriate set of linked assessment tools is currently being developed by the SOMA-EssentialTalk partnership. In November 2008, the EDS was used for the first time to deliver a SOMA course on Urology to our inaugural class at 11 different sites across the US. Students worked individually and as small, faculty-facilitated study groups to accomplish the course objectives. The EDS functioned flawlessly. Student scores on objective exams demonstrated student performance in this course was better than performance in other courses within the curriculum. Surveys of student attitudes reflected very positively on organisation of the topics, access to content and ease of use.
Shifts in Perceptions of Ideal Learning Environment: Pre- and Post-Questionnaire Statistical Results from an Ambulatory Pediatric Clerkship Experience

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Introduction
Adult learning theory emphasises the importance of students having control over the content being learned. With changes in the way paediatrics is practiced, the junior clerkship at the University of Nebraska Medical Center strategically chose to modify the curriculum in 1997 to focus on a more ambulatory experience. During the first two years of this curriculum change, students indicated preference for being on inpatient wards for their education. Since careful steps were taken to organise a comprehensive ambulatory experience, undertaking a study to assess if a change in opinion about preferred learning environment would occur during the course of the 8-week clerkship. This is even more pertinent now with diminishing resources and increasing class sizes, understanding where students feel they best learn is an issue.

Hypothesis
After completing a structured ambulatory clerkship, students should recognise ambulatory or a combination of more clinics with some inpatient as the preferred learning environment in paediatrics.

Subjects
A convenience sample of students from 1999 to 2006 (N=885).

Methods
At orientation for the clerkship, students are asked to complete a pre-course questionnaire. One of the questions asked their opinion about the preferred environment to learn paediatric medicine, inpatient wards, outpatient clinic, both, or no opinion. The same question was asked on the course evaluation given on the last day of the clerkship. Student identification numbers were used to match responses and only data was used if both questions were answered. This study was approved by the IRB.

Results
Chi-square testing was conducted on changes in opinion of pre-course choice of learning environment. Paired sample t tests were also conducted comparing initial responses to final opinions. A significant relationship was found in changes of initial opinion for outpatient clinic ($\chi^2(3)=16.059, p<0.05$) and for both ($\chi^2(3)=11.078, p<0.05$). This was further corroborated by paired sample t tests (Outpatient: $t(4)=-5.401, p<0.05$; Both: $t(4)=-8.812, p<0.05$).

Conclusions
Even with strong ambulatory experiences at either community or university clinics, students continued to prefer the inpatient setting over ambulatory or some combination. Of the students who initially chose ambulatory or both environments, more than 41% changed their opinion by the end of the clerkship to inpatient being the preferred setting. This is indicative of student comments that they prefer having more time to think about the patient's problems.
International Medical Education
Online Synchronous Transnational Collaborative Learning within MedEdWorld

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It has been suggested that the future of medical education lies in a move towards a transnational approach that involves collaboration between medical schools. MedEdWorld is a new global online medical education community within which there is, inter alia, considerable opportunity for collaborative learning in a transnational context, so it was appropriate to investigate associated issues in a synchronous transnational collaborative learning session involving 10 medical schools, with a maximum of 10 clinical year students and a facilitator at each site.

In order to exploit the transnational aspect of the experience, schools were chosen from the following countries: United Kingdom, United States, Netherlands, Turkey, Kuwait, Zambia, India, and Thailand, with an observer in Portugal. The session was co-ordinated from Dundee.

The chosen topic was “TIA & Stroke” and focused on a patient management problem presenting at primary health care level. Throughout the interactive online session, a range of response types was sought from students, including simple yes/no indications, single answer MCQs, matching items, free text responses, and raise hand-initiated elaborative or explanatory responses. The questions were intended to encourage thinking and reasoning in the context of evidence-based medicine.

Wimba, a leading provider of collaborative learning software applications and services to higher education, made available their platform for the investigation. It enabled the presentation to be webcast so that live video images of the presenter and participants (where technically possible in their particular circumstances) were displayed. The presenter used PowerPoint to display on all monitors, the framework and content of the topic and the required assessment items. The structure of the presentation moved from the initial presentation of TIA through subsequent development of cerebral infarction, and the consideration of several “what if…” scenarios requiring interpretation of ECGs, CT scan, and carotid duplex video images.

At several points during the presentation, and in relation to questions raised, the opportunity for discussion of clinical approaches in the respective countries was pursued.

After the presentation, participants were invited to respond to a number of MCQs relating to the various aspects of the trial. Overall, there was considerable support for most aspects, with more than 90% of participants agreeing that the format of the presentation encouraged thinking, that being able to make text comments was a good feature, and that there is considerable potential for this kind of interaction and collaboration in medical education. That potential will be explored further.

Reference
Medical Education in Central and Eastern Europe: English Parallel Courses

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The existence of medical training programs in the English language outside the UK is long-standing. Courses in Australia, Canada, New Zealand and the USA are well recognised, as are programs in South Africa and the West Indies. However, during the last twenty years additional programs have been established. Initially many catered for American students seeking less costly education and were based offshore of the USA. However, similar schools soon appeared in Eastern Europe and the former USSR.

There is historical precedent for British students travelling to Europe for medical training. The wish to seek education at centres of excellence far from one’s country of birth reaches back to the origins of formal medical training. The driving forces have been a combination of traditional “push” and “pull” factors. In medicine, most attention has been given to “pull” factors where charismatic teachers were seen as magnets drawing students towards them.

In 1992 Charles University, Prague introduced an English taught course, often known as the “English Parallel”. It follows the traditional pattern of a six year program, with three years of preclinical sciences, before entering clinical rotations. Initially 5 or 6 students were enrolled each year. By 2004 the figure had risen to 60 and now runs at more than 100. There are at least 18 such courses in the EU and 16 just outside its borders.

Data on graduates from Central and Eastern Europe, who may have been of British or Irish origin, were collected from the General Medical Register of the United Kingdom and the Medical Register of Ireland. Between 1990 and 2005 1614 doctors, who had trained in universities from Eastern Europe with English Parallel programs, registered with the General Medical Council. Graduates with English sounding surnames and first names were identified and those qualified between 1994 and 1999 compared with those from 2000 to 2005. In the earlier period there were 18 graduates compared with 27 in the latter period. In Ireland of the 58 physicians who qualified after 1990, 28 registered with the Medical Council, in 2004 and 30 in 2005. Of these doctors, 3 had typical British or Irish surnames. Registration rates were similar for the two communities.

There are a growing number of universities who provide English Parallel courses and together with the impact of the Bologna Process, significantly more people from the UK will train elsewhere in Europe but practice in the UK and Ireland.

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‘On-Call with a Foundation Year 1 Doctor’ a Third Year Medical Student’s Perspective

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Objectives
This paper explores the levels of experience and confidence felt by third year medical students in the various tasks of a junior doctor, after spending two days shadowing a foundation year doctor on-call. It aims to show the potential advantages of compulsory shadowing of junior doctors in the third year (i.e. first clinical year) of medical school training as opposed to leaving it until the final year, as the GMC recommends (GMC – Tomorrow’s Doctors, 2003).

Method
Two third year medical students each spent two days on call with a Foundation Year 1 doctor (FY1). The students were in charge of the bleep, carried out the paperwork including writing medical notes and discharge summaries and helped make decisions around prioritizing patients and time management. A questionnaire was completed by the students to assess how confident and experienced they felt carrying out the different tasks of a junior doctor at the beginning and end of the on-call sessions and the difference was analysed. Patient care and duties of the FY1 were not compromised and the students were not left alone at any time.

Results
It was found that both students reported feeling overall more experienced and more confident in the various duties of an FY1 after their two on-call sessions. This was consistent in the various categories: Good Clinical Care, Maintaining Good Medical Practice and Recognition and Management of the Acutely Ill.

Conclusion
This could have implications for the future of medical training. Students will gain a realistic idea of life as a junior doctor early on in their training which may accelerate specialist career choices, or choices to discontinue medical training thus saving time and money. The students also learn to be professionals through interactions with colleagues. The GMC recommends fifth years be given this opportunity but with the introduction of the European Working Time Directive (EWTD), working hours have been reduced, therefore junior doctors do not gain as much experience as they used to (Shah, Ramen et al, 2003).

Firms vary in size and consultant expectations therefore not all students have the opportunity on-call. By making it compulsory, it will ensure all students have this valuable experience including one-on-one teaching. In addition, it was qualitatively found that junior doctors generally found it useful to have an extra pair of hands. This is an exciting and positive preliminary study.
Management / Administration
Why do students still choose medicine?

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Introduction
Medicine is a physically and emotionally demanding career choice, remunerated relatively poorly compared to other professions and without the stability and long-term prospects it once promised. Despite this, it remains the single most competitively contended career choice at university entry in the United Kingdom. In this study, we aimed to find out what motivated medical students to choose a career in medicine and whether there were any racial or gender patterns to be found.

Methods
300 medical students were asked their reasons for choosing medicine as a career. Data was collected on ethnicity, previous education and gender.

Results
Overwhelmingly, students chose medicine for altruistic reasons. A large proportion of students also drew from their own experiences of healthcare as patients and carers when making the decision. Few rated income as an influencing factor and while family pressure was more important among the Asian community, it was still less important than a desire to contribute to the greater good.

Conclusions
Medical students choose medicine as a career for altruistic reasons and usually base this on personal experience. With university places now so hotly contested, medical students in the UK might be disappointed with the lack of long-term stability and promotional prospects the profession now offers.
A comparison of two IT based methods of Quality Assurance of Foundation Training

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Introduction
The North Western Foundation School has over 1000 trainees using the FT-NW e-portfolio. We aimed to compare quality assurance (QA) of Foundation Training (FT) by comparing two IT based methods in the 2007-8 cohort of trainees

Methods
The PMETB survey (PS) included FT for the first time in 2007. PS returns a scale from 1-100 with no generic standard or benchmark. The QA function of FT-NW includes compulsory feedback forms (negotiated with junior doctor representatives) used 4-monthly, before allowing progress to the next part of the portfolio. The trainees judge on a four-point scale against a defined standard.

There are comparable domains between the two instruments around induction, educational supervision, trainer feedback, clinical supervision, clinical experience, education environments and learning opportunities. We compared returns in eight local educational providers.

Results
The PS survey UK-wide response rate was 66 per cent, and that in the North Western Deanery was 74 %, compared to 100% response for FT-NW. PS produced a ‘snapshot’ of QA during the period of the survey where FT-NW gave rolling 4 month data. PMETB do not report feedback on posts with small numbers of returns so small units and specialties are missed out. PS results are in the public domain, whereas FT-NW have traditionally been for internal QA only. FT-NW reports on all units and specialties no matter how small, raising concerns about traceability of results. These confidentiality concerns were addressed by pooling results from smaller units, withholding till year end.

PS results are presented graphically and may give more insight into the data. PS is designed to cover domains relevant to junior doctors like work intensity score, consultant bullying. FTNW touches on some educational aspects that PS doesn’t, such as responsibility, emergency work and unproductive tasks.

Correlation between the two methods was patchy. Foundation doctors fed back similarly in some areas of both surveys, but not necessarily in other domains in the same hospital.

Conclusion
Nothing has been published on the use of e-portfolios for QA of training, but their universal use, trainee buy-in and encouragement of reflection are all useful in QA. The two instruments cover different topics but with considerable overlap which is useful for triangulation.

There is more to a survey instrument than simply being web-based and this study highlights subtle differences in the techniques used. Careful attention should be given to methodology when developing QA instruments and interpreting their results.
Multi-professional Education
The value of a Community Day placement for Senior Medical Students during a Child Health Clinical Attachment

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Introduction
It is important that medical students receive a full programme of teaching and experience child problems in the community. Graduates must know about and understand principles of treatment; including rehabilitation, care within institutions and in the community. At Leicester Medical School, there are many opportunities for students to learn in a community setting. Including a community day which students undertake during their Child Health attachment. Pairs of students spend 1 day in the community. They attend morning and afternoon sessions and have the opportunity to experience varying healthcare provision services. These include clinics and multidisciplinary team meetings. This study was conducted to find out how useful medical students found the day, and what they thought its values and drawbacks were. The day was compulsory for students however, it was not assessed.

Method
All students (n=31) on the Child Health attachment between May and June 2008 were given a questionnaire regarding the usefulness of the Community Day, of which 28 were completed. They were asked whether they attended the community day, how easy it was to arrange and find their destination, whether the learning objectives were met and how useful they found it.

Results
Of the 28 students who completed the questionnaires, 24 students attended the community day. The reason given for not attending was cancellation of the day. Approximately three quarters of the students thought it was easy to arrange and easy to find their destination. On average, three quarters of students found that they met the learning objectives set out for them. Students were exposed to behavioural and neuro-developmental problems the most, compared to educational, social/cultural and communication problems. About two thirds of the cohort found the community day useful. Reasons given for not finding it useful included students not having enough exposure to patients, patients with problems that were too complex and students not being sufficiently involved.

Conclusion
The results indicate that the community day was considered useful and productive by the majority of students. However, in its current format there are areas for improvement, which are being addressed. Students have since been made more aware of options for rearranging cancelled community days, so that attendance rates will improve. Community Paediatricians who are involved in organising the community day now inform students about it in an introductory lecture at the beginning of the block and attend student feedback sessions at the end of the child health block.

References
The value of evening presentations for senior medical students during a child health clinical block

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Introduction
Students should receive a full programme of teaching, with the opportunity to learn to educate others, because teaching Skills are essential for every qualified doctor to have. The core curriculum must be the responsibility of clinicians, basic scientists, medical students and medical educationalists working together to integrate their contributions and achieve a common purpose¹. During medical school many different teaching methods are used to optimise students’ skills and knowledge. At Leicester Medical School, evening presentations are used as part of the child health clinical block to improve understanding of common paediatric conditions. There are 12 presentations scheduled over a 3 week period, timetabled for 5-6pm and they are compulsory for students to attend. All students are expected to present a topic at one of the evenings and mentors (consultants or specialist registrars in paediatrics) attend the sessions to assess and teach. The aim of this audit was to evaluate the effectiveness of the evening presentations during the child health clinical block.

Method
All students on the child health clinical block between May & June 2008 were given a questionnaire (n=31) to complete about the usefulness of the evening presentations, of which 20 were completed. The students were asked to answer anonymously how many presentations they attended, how interesting and useful the evenings were and how helpful the mentors had been.

Results
Of the 20 students who completed the questionnaire, three-quarters of the students attended 10 or more of the 12 presentations available to them. Over 80% of the students thought that the presentations were interesting. On average, 70% thought that evening presentations were useful, with regards to presenting a topic and watching other students’ lectures. Approximately, three-quarters of the students thought that the mentors were helpful during the evenings.

Conclusions
The results indicate that the evening presentations were considered useful and productive by most of the students. However, in its current format there are areas for improvement, which are being addressed. Students are since being registered at the presentations to encourage 100% attendance. It has also been recommended that mentors approve the topics to be presented to ensure that they are all useful and relevant for medical students. Both of these points will be emphasised to students during the introductory lectures at the beginning of the child health clinical block.

References
3rd Year medical and nursing students’ views on the benefits to the patient of a multidisciplinary
team meeting using simulation

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Introduction
There is debate about whether students benefit from the early introduction to inter-professional learning. On qualification, however, they are expected to work in multidisciplinary teams to benefit patient care.

Aim
To identify junior medical and nursing students’ views on the benefits of a MDT meeting for patients.

Methodology
All third year medical and nursing students participated in a simulated inter-professional exercise. This included participating in a simulated multidisciplinary team meeting about a patient with rectal cancer where medical and nursing students were given different roles and responsibilities as members of the team. At the end of the 2 hour exercise they had to record their views as to why the MDT would benefit the patient. The qualitative data was analysed using an iterative process to determine consensus.

Results
Four themes emerged in relation to benefits for the patient which were
- Provision of continuity of care at several levels
- Efficient co-ordination of patient management
- Provision of patient centred care
- Established clarity of roles and responsibilities within the team

Conclusion
Junior medical and nursing students at an early stage of clinical experience are able to identify the key benefits of an MDT meeting to patients. Giving them the opportunity to rehearse together in a simulated setting enabled them to identify the need for teamwork as a key benefit. These finding in a simulated setting reflect similar reports from clinical practice. This study provides additional evidence which supports the benefits of an early introduction of inter-professional working using simulation.
Clinical audit and quality improvement in NHS Scotland – time for a rethink?

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Introduction
Evidence of the benefits of clinical audit to patient care is limited, despite its longevity. Additionally, numerous attitudinal, professional and organisational barriers impede its effectiveness. Yet, audit remains a favoured quality improvement (QI) and educational policy lever. Growing interest in alternative QI techniques suggest it is timely to re-examine audit. Clinical audit advisors assist healthcare teams, so hold unique cross-cutting perspectives on the strategic and practical application of audit in NHS organisations. We aimed to explore clinical audit advisors’ views and experiences of their role in supporting healthcare teams in the audit process.

Method
Qualitative study using semi-structured and focus group interviews. Participants were purposively sampled (n=21) across health sectors in two large Scottish NHS Boards. Interviews were audio-taped, transcribed and a thematic analysis performed.

Results
Work pressure and lack of protected time were cited as barriers which were thought to inhibit clinician involvement in audit, but participants believed these hid other reasons for non-engagement. Different clinical professions were thought to experience varying opportunities to participate in audit. Doctors were perceived to have more opportunities and may dominate or frustrate the process. Participants reported that audit was perceived by clinicians as a time-consuming, additional chore and a managerially-driven exercise with no associated professional rewards. Management failure to support and resource changes fuels low motivation and disillusionment amongst clinicians. Audit can be regarded as a ‘political’ tool which may be stifled by inter-professional differences and contextual constraints.

Discussion
The findings echo previous studies. In the context of the study and the overall evidence, we found limited scope for suggesting that audit as presently defined and used could meet policymakers’ aspirations. Real-time audit providing immediate feedback for QI, alongside large-scale audit for regulatory scrutiny meeting a quality assurance agenda might offer a useful dual system. However, identified professional and organisational barriers are still to be overcome. A debate on the future of audit alongside new approaches to QI as part of the education and training of healthcare professionals is necessary.
CSI – A Novel Approach to Teaching Hand Hygiene to Junior Medical and Nursing Students

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Background
There is a wealth of evidence dating back to Semmelweis in 1847 surrounding the impact of poor hand hygiene on healthcare associated infections (SEHD, 2009). The evidence is so strong that the Scottish Cabinet Minister for Health introduced a zero tolerance approach to poor hand hygiene in February 2009. The fiscal costs of healthcare associated infections are enormous but these fade into insignificance when one considers the human costs in terms of pain to patients, increased hospitalisation and in some cases death.

The University of Dundee has taught hand hygiene and infection control to medical and nursing students in Semester 1 of each course for the last four years. In light of the introduction of the World Health Organisation ‘Five Moments for Hand Hygiene’ we decided to review the teaching sessions.

Methods
An action research method was chosen to facilitate this educational research. A review of the literature and the teaching impact was undertaken followed by focus groups with students in year 2 of the programme. Students identified that the main message they got from the teaching was about hand washing, but they felt that at the early stages of their course they could not see the relevance having never been in a clinical setting.

The teaching was changed to include more of a focus on the ‘Five Moments’ and the novel introduction of CSI – Crime Scene Investigation. Students spent time around a typical hospital bed-space using ultraviolet light to trace the ‘unseen’ contamination.

Results
This poster will describe in detail the ‘Five Moments’, the teaching session and full results of the subsequent focus groups undertaken with students to assess the impact on their learning. The study showed that students found the CSI session more relevant in terms of the concept of contamination and spread of bacteria. They discussed the importance of hand hygiene and were able to describe the need to use alcohol hand gel in the ‘Five Moments’. Results of a formative OSCE station indicate that the message is getting through to students in this early stage of their careers.

As this research is cyclical the poster will go onto discuss planned developments in the teaching in terms of maintaining the momentum and learning.

Reference
The Impact in undergraduates of multi-professional teaching in musculo-skeletal skills

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Background
Musculoskeletal teaching is an essential aspect of undergraduate medical education. Traditionally this is delivered by medically trained teachers from orthopaedic surgery and trauma backgrounds. Multi-professional facilitators with anatomy knowledge for their own related specialty i.e. physiotherapy, are often an under utilized resource in generic musculoskeletal teaching skills of medical students.

Summary of work
A modular course was developed to cover essential large joint anatomy, physiology, examination and common conditions affecting those joints. Medical students attended interactive teaching sessions, using a variety of activities. The sessions were facilitated by experienced multi-professional teachers from an advanced physiotherapy background.

Summary of results
A post-course questionnaire was developed to gather anonymous data from 16 students attending a musculo-skeletal teaching course. Qualitative data was collated and a thematic analysis applied.

Conclusions
Key themes were:

<table>
<thead>
<tr>
<th>Positive</th>
<th>Negative</th>
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<tr>
<td>Students ability to recognize generic key skills in clinical examinations</td>
<td>Inability to gain feedback in the clinical setting from the skills they had learnt</td>
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<tr>
<td>Students hold the view that clinical skills translate into practice</td>
<td>More clinical teaching in anatomy within the clinical setting</td>
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<tr>
<td>Interactive teaching was a vital part of the course</td>
<td>Little joint pathology available to practice on within the teaching sessions</td>
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<tr>
<td>Multi-professional teaching was valued</td>
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Take-home messages
There is a potential untapped resource of related health care professionals within secondary care, who are keen to participate in medical undergraduate teaching.
Does gender and profession affect student responses to RIPLS?

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**Background**
The readiness for interprofessional learning scale (RIPLS) is designed to assess participants’ attitudes to Inter Professional Learning. This scale considers areas of teamwork and collaboration, sense of professional identity and patient-centredness. There is published data validating this tool and findings related to what are often specific single IPL activities. There appears to be little data however which considers if gender or profession influences types of responses to this scale.

**Aims**
To consider whether gender and profession affects responses to RIPLS scale.

**Material and Methods**
Two consecutive student cohorts (2005 n=654 and 2006 n=236) were asked to complete the modified RIPLS at the beginning of an e-learning interprofessional pathway. The student cohorts consisted of 12 professional groups: all branches of nursing, midwifery, medicine, clinical psychology, physiotherapy, occupational therapy, dieticians, paramedics and social work. Responses to RIPLS according to gender and profession were analysed using SPSSv15.

**Results**
Statistically significant differences between male and female students, for both cohorts, were found for the 'team working', 'collaboration' and 'uniqueness of discipline' sub-scales of RIPLS. Overall, for each of these sub-scales, female students scored better than their male counterparts (p<0.01, respectively), by between 3% and 9%. For the 'professional role' sub-scale, male students scored more highly than female students (p<0.001) by approximately 6%. There was no significant difference, on average, between male and female students for 'patient-centredness'. On average, all professional groups scored in the positive range of scores, with learning disability nursing students highest overall. Virtually no social work or clinical psychology students scored negatively, but a few students in other disciplines scored negatively on more than one sub-scale.

**Conclusions**
Gender and profession may influence students responses to RIPLS and should be considered when evaluating IPL activities.
New Technologies
The London Deanery has developed a series of e-learning open-access modules covering core topics in clinical teaching and learning to support the professional development of clinical teachers.

**Background**

In 2002, the Deanery commissioned a project to develop a web-based resource for clinical teachers, comprising modules on underpinning theory and practical application of theory to clinical teaching contexts written by a group of medical educators. In 2007/8, in response to policy drivers, workforce demands and service changes, the Deanery reviewed the web-based resource and decided to repurpose some of the original material and commission new modules as part of an edited series [www.faculty.londondeanery.ac.uk/e-learning](http://www.faculty.londondeanery.ac.uk/e-learning). The series also supports a development programme for educational supervisors.

**Key features**

The series is designed for clinical teachers as an introductory or refresher and as a complementary resource to award bearing programmes. It specifically supports faculty development programmes offered by the Deanery and associated organisations. Modules topics include: Feedback; supervision; workplace-based teaching and assessment; diversity and equal opportunities; career development; appraisal; lecturing; small group teaching and setting learning objectives. Each of the modules includes: definition of the topic and learning theory; suggested workplace-based activities designed to apply knowledge in the clinical context and completion of a reflective log which asks teachers to think about what worked (and what didn’t), identify learning, some ‘learning edges’ and actions for future teaching practice. Further reading (articles, weblinks and other resources developed by the London Deanery) and a glossary of terms are also identified. On completion of each module, teachers can print off a certificate of completion for revalidation or appraisal records.

Because of the dispersed nature of the participants and the large numbers potentially involved in using the modules it was deemed impractical to include formal summative assessments or discussion boards. However, in order to promote reflective practice and engagement with individual’s teaching practice, self-assessment and reflection is included as an integral part of the learning in each module.

**Evaluation and next steps**

We monitor usage and engagement of the modules. They are accessed by a wide range of people (students, trainees, qualified professionals, supervisors) from various health professions, medical education and staff development. Module evaluation has been very positive. Recently, we have developed the resource further in response to external policy changes and feedback. We are currently exploring how CPD points can be awarded through completion of modules in order to provide additional benefits for users.

**References**

A Qualitative Analysis of Medical Student Blog Entries Written Whilst on Placement in an Emergency Medicine Department

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Introduction
Emergency Medicine is a relatively new and evolving aspect within the undergraduate programme in Leicester. For the past year all senior students have rotated through the acute care block at Leicester Royal Infirmary for 7 weeks at a time. In an effort to gain insight into the student experience, all students have been required to post an internet blog after each “shift”. This blog has been used as a surrogate indicator for attendance and has also provided a space for reflection on their experiences.

Objectives
To explore medical students’ experiences of Emergency Medicine and discover factors that support or inhibit their learning.

Design
A qualitative study using medical student blog entries as the source of data. An Interpretative Phenomenological Analysis (IPA) approach was used to analyse the data. Blog entries were posted on a specially created “Blackboard” virtual learning environment.

Participants
A sample of 30 medical students in their senior clinical rotation at Leicester University Medical School.

Results
Various themes were derived from the data. Students’ experiences varied widely, depending on their exposure to different patient groups and support offered by staff. Clear learning objectives were important as well as the provision of opportunities to achieve these. Student’s had a desire to be useful and effective in patient care, mentioning the importance of being included as part of the team.

Conclusions
The study provided a fascinating view into medical students’ perceptions of emergency medicine, as well as providing potential areas for enhancement of undergraduate learning within the emergency department. The sheer variety in emergency medicine evidently sparked enthusiasm from students and in many cases initiated career planning.
Using SMS Text Messaging To Teach Undergraduate Emergency Medicine

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Background
Facilitating learning for large cohorts of medical students within a busy Emergency Department can be a challenge for clinical teachers. We present a novel technique to get them to engage constructively with our published learning outcomes. Utilising individually sent SMS text messages, the students were invited to research particular emergency medical topics. They then published the work on a “Blackboard” based discussion board formatted for their placement. The work being shared by the whole group.

Aims
This study aims to demonstrate how SMS text messaging (provided by NHS.net) can be successfully used to focus learning in the Emergency Department.

Method
Two cohorts of final year medical students N=29 and N=34 each cycled through our seven week Acute Care Block. This forms part of their senior rotation. Utilising NHS.net we sent free text messages to individual students throughout each block. Each message instructed the student to research a given topic from our syllabus. They then had to publish their response on the course virtual learning environment discussion board. The responses were shared by all students in that cohort. Each student received 2-3 SMS instructions over the 7 week course.

Results
Students engaged with this method of stimulating learning very well. Each cohort published in the region of 60 topic summaries. They were of variable quality but generally factually correct and open to peer scrutiny. The peer review was an important motivator in the quality of the posts.

Conclusion
SMS Text message in undergraduate education is a novel use of a widely accepted technology in the student body. With very little input from the facilitator the students were encouraged to generate a large amount of relevant work that benefitted them and their fellow students.
The feasibility of using 3D stereoscopic visualisation in anatomy teaching

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Introduction

Reports from the UK and Australia show that anatomy education in universities is in crisis due to a reduction in time allocated to the subject and decreased opportunities to dissect cadavers. Efficient use of new technology and teaching methods could allow better teaching and learning of this vital subject. For visualising human anatomy using three dimensional (3D) computer generated images, two rendering techniques are currently being employed; namely polygonal and volume rendering. It is essential to evaluate these techniques in the context of anatomy teaching before investing time and money to develop educational material with one of them.

Aims

To explore the feasibility of using rendering techniques in 3D anatomy teaching.

Methods

Initially, existing open source solutions (OpenSceneGraph, ITK, and VTK) were tested. We then developed our own volume and polygonal rendering systems. Data used for generating the models were a combination of 3D CT, MRI and 2D photographs. The data was segmented to separate anatomical structures for easier viewing and labelling, then displayed using polygonal and volume rendering. The educational value of each rendering technique was evaluated based upon ability to visualise anatomical structures and production time required.

Results

Polygonal rendering was useful for all anatomical images except cross sectional images of the body; these were only possible with volume rendering.

Unsegmented volume rendering models were faster and easier to create than polygonal models, however, these models are not of high enough quality for educational use.

The quality and clarity of the final models for both techniques was limited primarily by the quality of the radiological images, but little could be done to enhance volume rendered images. Polygonal rendering was suited for generating educational models as it allowed labelling and painting of surface anatomy landmarks but this was extremely time-consuming.

Conclusion

In conclusion the choice of rendering technology determines the educational value of the end product due to the intrinsic limitations of each rendering technique. Volume rendering currently has a limited role in anatomy education because of the as yet underdeveloped nature of current segmentation methods and the quality of current scanning technology. Polygonal rendering has a better potential for creating educational material. However, it will require very considerable time and expertise to develop a complete solution comparable to traditional methods.

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Social networking technology in developing professionalism

D Robinson, H O'Sullivan

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An investigation into the mechanisms by which students use web 2.0 technologies to communicate about academic and professional matters in facilitating the development of professionalism.

A website was developed using the ‘Ning’ Social Networking platform to support students during their first year in medical school. This site was designed with an educational focus allowing for themed dialogue regarding career management, personal and professional development and developing professionalism. Other innovative Web 2.0 technologies were used on the site including RSS feeds, social bookmarking feeds and YouTube videos. These technologies were used to provide guided learning opportunities and supporting resources.

After a successful pilot during 2007/2008 with 50 students taking part, the site has now been redeveloped to support all 335 first year students on the MBChB award. An initial analysis of the site usage statistics shows many learners engaging with the site on a daily basis. Over a 4 month period the site was visited over 1,200 times with over 10,000 pages being viewed. After a full analysis of usage, focus groups will be used to gain an understanding of students’ attitudes towards using such technology in education and how it can be further developed.

It is crucial to consider the needs of the next generation of learners who are now entering medical education and the use of technology, in support of these students, is of ever increasing importance. The pilot study demonstrated how the social networking technology can be developed to provide a learning environment that is flexible, stimulating and intuitive. However there are issues which need considering when using innovative technology such as manageability, security, copyright and institutional policy.
An exploration of student doctors views on information technology and web 2.0 resources within medical education

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Introduction
The project was undertaken by a student doctor as part of the Phase 3a SSC.

Background
Modern medical practice, education and research are information intensive activities. World Wide Web resources provide a fantastic potential for distributing educational materials and for facilitating distant collaborative learning amongst students and physicians. Over the last few years, there has been a lot of interest in the areas of information technology and e-learning within medical education. The aim of this study was to gain insight into the main web resources used by student doctors and to investigate to what extent they perceive technology to be of beneficial value towards their medical education.

Method
Following a review of the literature and an initial focus group interview, a questionnaire was developed which included questions with a range of response options. Face and content validity were established prior to the questionnaire being posted on the schools online learning environment. Additionally, four focus group interviews were undertaken (one per phase). All students were provided with an information sheet detailing the purpose of the study and invited to participate anonymously. The quantitative responses were analysed using Touchstone software and qualitative data subjected to a thematic analysis.

Results
All students were invited to participate (n=1256; response rate= 41.6%) and twenty one students contributed to the focus group discussions.

Students use an extensive range of web 2.0 resources. The use of Facebook and Wikipedia were the most popular amongst students with over 90% of all students using them at least once a day. Students reported that they used Wikipedia for quick summaries, definitions and a starting point for integrated learning activities (ILA’s). Facebook was used for communicating with colleagues (50%) and discussion of ILA’s (55%).

Over 70% of students said they use web 2.0 resources for medical education purposes. However, most students, including the ones supportive of e-learning, expressed some concern about the loss of interpersonal and communication skills as a consequence of over-reliance on technology.

Conclusion
Students perceive e-learning as an essential aspect of modern medical education; however, students see it as complementary to the traditional methods, rather than an alternative to them.
Medical Education
Does undertaking a BSc improve subsequent results at a London Medical School?

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Background
Intercalated BScs are an optional part of the Medical School curriculum in many Universities, at an added expense to both the student and the Medical School in terms of time and costs (approx £40,000). Does undertaking a BSc improve subsequent student performance? A systematic review has provided evidence that BScs probably improve subsequent performance but these studies have been flawed by BSc students being highly selected. This study looks at data from medical students after the introduction of compulsory BScs at one school.

Aims and Objectives
To compare first year clinical exam results from the Academic Year 2005/6 to see whether there is any difference in performance between students who had intercalated before or after the first clinical year.

Methods
A univariate analysis was performed on first year overall clinical results and also on individual exam components (OSCE, logbook and written paper). Results from a total of 382 students were compared. Graduate or transfer students (mainly Oxbridge) were excluded from the analysis. A general linear model was applied to adjust for differences between the two groups in terms of potential confounders (age, sex, nationality and baseline A level results).

Results
There was a mean difference in overall end of first year clinical exam scores of 3.8 (238.4 early Bask students vs 234.6 late, score range 145 to 272 out of 300), with the group which had taken the BSc scoring higher. This result was statistically significant (p=0.028) and remained so after adjusting for differences between the two groups as described above. Interestingly, whilst there was a significant improvement in written and logbook scores for those who had taken an early BSc, there was a borderline significant reduction in OSCE score.

Conclusions
Intercalated BScs produce a significant (though small) improvement in first year clinical exam results. This result is important as it is taken from a student group where BScs are compulsory so minimizes the issue of selection bias. This finding provides support for including BScs as a compulsory part of a medical degree; not only do they provide valuable research experience but they also appear to improve outcome in clinical exams. Larger studies are needed to see if this result is reproduced in other years and at other medical schools.

References
Patient Voice
An Exploration of Teaching Strategies and of the Application of Client-Centred Care during Undergraduate Physiotherapy Clinical Practice

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Background
The existence of any health professional archetype is the result of the need to care for people who are unwell. The worth of any clinical teaching program can be measured by the extent to which it meets both the students’ learning needs and is consistent with the health care needs and the rights of clients.

Aim
To explore and make explicit the perceptions of students, facilitators and clients in regard to the ethos of contemporary clinical teaching, learning and client care events.

Method
The qualitative study, an illuminative evaluation made use of survey, observation and interview data to answer the fundamental research question: What is the nature of the teaching and learning processes involving clients and what is the extent of the focus on client-centred care in teaching and learning in undergraduate physiotherapy clinical education?

Participants
Ninety four undergraduate 3rd and 4th year physiotherapy students, thirty seven clinical facilitators from the University of Newcastle, Australia and eleven clients.

Findings
The study identified what students and facilitators regard as good teaching strategies and indentified variations in current teaching processes in the 1:1 and 2:1 student to facilitator ratios. Clients are asked to give informed consent to care by students. Students actively seek feedback from clients who do give them genuine feedback about how their activities are affecting them. The feedback students are given by their teacher is in accordance with best practice, however the students do not always discuss with their clinical teacher when they think the client may have had an adverse affect to care.

Conclusion
The study identified the existence of a triadic approach to clinical teaching and that the experiential model of teaching and learning and models for client-centered care underpin contemporary clinical teaching strategies. When the students have the opportunity to work with clients who have genuine health concerns, the Australian physiotherapy clinical facilitators are, in the main, able to address the students’ learning needs and balance this with responding to the clients’ rights, needs and preferences.

Contemporary teaching is in alignment with the Australian Physiotherapy Association’s Standards expected of entry-level physiotherapists, the Australian Patient Safety Framework and the Australian Charter for Patients Rights. However, further exploration is required to explore the students’ ethical conduct related to adverse clinical events.
Communication with parents on a paediatric surgical unit

M Coles, G Duthie

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We present the results of a survey of parents assessing satisfaction with the communication techniques of surgical staff on a general surgical ward. Previous research has identified the quality of communication as a central factor in the satisfaction parents feel with their child’s stay in a paediatric inpatient setting. To assess the performance in our own unit, a questionnaire was designed and given to parents at the time of their child’s discharge. Through this they were asked to assess the manner in which surgical staff addressed them, the volume and appropriateness of information given, explanations of diagnoses and tests, explanations of ongoing management plans and the addressing of any concerns. Over a four-month period, 77 questionnaires were distributed and 67 returned (response rate = 87%).

Our results show that a large majority of parents were satisfied with the level of communication they received, with over 90% feeling that appropriate language had been used, that explanations were clear, and that opportunities had been provided for them to ask further questions if required. Additionally, 98% of parents reported that they felt confident they knew what the ongoing management plan was for their child at time of discharge. The minority who raised concerns listed information overload, failure to explain the details of upcoming tests, and a tendency towards jargon as problems. Amongst the whole cohort there was a problem with identifying members of the surgical team, with a third of respondents either not recognising their consultant or knowing his or her name.

This study concludes that whilst overall communication in our unit is satisfactory, clear interactions remain paramount, and there remain areas where improvements can still be made. In particular we note that the identification of the role of individuals in the surgical team can be challenging for parents.
Listening to Patients - Simulated Patients’ Evaluation of an Interprofessional Ward Simulation Exercise

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Background
There is increasing evidence to support the use of simulation in healthcare education (Ker and Bradley, 2007), ensuring that learners have been prepared to safe levels of practice before entering real life practice. The use of Simulated Patients (SPs) plays an increasingly important role in the education of healthcare practitioners and at the University of Dundee SPs participate in progressively complex simulations. The aim of the Interprofessional Ward Simulation Exercise is to allow year 3 medical and nursing students to demonstrate teamwork skills, communication and core practical skills which they have learned over the three years of their respective courses.

Methods
Simulated Patients were asked to complete a structured questionnaire following their ward simulation experience in which they were asked to feedback on the medical and nursing students’ interprofessional communication, attitudes and the SP’s personal perspective of the care they received during the exercise.

Results
Analysis of the patient questionnaires demonstrated good levels of interpersonal communication between the two professions and with the SP, the SP’s were satisfied with the students’ caring abilities and reported acceptable attitudes. Under free texts the SPs reported feeling well prepared for their role in the exercise and found the experience rewarding.

This poster will discuss the patients’ involvement and evaluation of an Interprofessional Ward Simulation Exercise for Year 3 medical and nursing students. The SP’s views are fundamental to the success of such an exercise and the feedback from this evaluation will be used to develop the IPWSE for this year’s cohort of students.

Reference
They’ve got to learn” medical student teaching in a hospice setting - attitudes of patients and staff

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Introduction
End of life care is seen as an important skill for all doctors to learn. Medical undergraduates spend time meeting patients in hospices to achieve this. Studies have reported that hospice patients enjoy being involved in student learning. Questionnaire-based studies suggest that hospice staff have positive and negative views. In particular, nurses may feel a need to gate-keep access to patients if they feel students have a negative impact on patients. Patients facing death may want to contribute to student education despite negative perceptions of health care staff. Similarly, evidence suggests that dying patients do want to be involved in research. Researching end of life care raises ethical, practical and methodological challenges. This study is novel as it uses semi-structured interviews of patients and hospice staff rather than questionnaires to explore their perceptions in greater detail and to clarify both the patient’s wishes and staff concerns.

Method
A qualitative semi-structured interview study at a single hospice site. Inpatient and day hospice patients that had been involved in medical student teaching were sequentially invited to participate. Hospice staff were purposively sampled to include day hospice or inpatient unit, medical or nursing staff. A topic guide was used as a prompt by the interviewers. The interviews were tape recorded and transcribed. Initially six (three patient and three staff) transcripts were coded by detailed line by line analysis, microanalysis. From these, initial concepts and constant comparison themes were developed, by agreement with the researchers. These themes were used to analyse further transcripts and to modify the topic guide. Once no further relevant themes were noted, recruitment stopped.

Results
14 staff: 5 doctors, 8 qualified nurses and 1 health care assistant have been recruited and interviewed. 16 patients were recruited (one withdrawn after consent as clinically deteriorated prior to interview), therefore 15 interviewed. The transcripts are being analysed and the main themes will be illustrated in the presentation.

Discussion
Overall, hospice patients and their staff do have positive views regarding medical student teaching in a hospice setting (“they’ve got to learn”), and make allowances or adaptations for the potential burdens. This study demonstrates the need for further research regarding the perceptions of medical students themselves. We hope these findings will encourage continued training in end of life care in hospices for medical students, while continuing to minimise the burden to patients and staff.

References
Listening to Patients: Using patient stories to create scripts for teaching
G Hogg, P Christie, G Keith, G Morris, J Ker
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Background
Simulated patients (SPs) have been used in medical education to provide students with realistic and effective training in a safe and realistic environment for many years (Adamo, 2003). The “Patients Voices” programme allows patients to tell their story or experience of health and social care with the aim of improving care. The Stories give the healthcare professional or carer an insight into experiences of patients allowing them to learn from them. Using this philosophy the Patient Bank Team at the University of Dundee carried out a small pilot study taking experienced SPs and allowing them to use their individual experiences (stories) to develop new scripts for teaching medical students.

Methods
A training session was organised with a group of SPs who were given a ‘trigger’ scenario with basic information. The SPs then worked in pairs to develop a script based on their own experiences, devise and apply suitable stage make-up for the scenario e.g. bruising, and then present the story to another SP who would act as a healthcare professional. Using an action research cyclical approach; the second stage in this process was to bring together SPs using the same scenarios as previously with medical students undertaking the consultation. Focus groups are being organised with the SP group and the medical student group to discuss the impact of the new scripts and the use of moulage.

Results
This poster presentation will discuss the results of the focus groups. Preliminary results from discussions show that patients are more comfortable talking about their own experiences rather than using a centrally developed script template. They have also suggested that using moulage can add to the realism of the patient doctor encounter.

Reference
Postgraduate Education
“Wales is definitely a friendlier country to train in”: a survey of medical students and junior doctors’ perceptions of training in Wales

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In the summer of 2008 a joint initiative between the Wales Deanery, and the BMA Cymru Wales was designed to explore the choices that doctors made as to whether or not they should undertake postgraduate training in Wales or not. An electronic questionnaire survey was developed by the Medical Education team at Cardiff in consultation with a representative of the BMA. The study aimed to generate both quantitative and qualitative data, via tick box and free text sections and focused on the perceptions that medical students and junior doctors had with respect to postgraduate education and training in the principality.

An email containing a link to the survey was sent via the BMA to 2659 respondents, of which 317 were medical students, 624 FY1 or FY2 doctors and 1718 were trainees in other grades. The on-line survey remained open for a one month period between mid July and mid August. Completed surveys were returned by 371 respondents during this period, providing a response rate of only 14% (317 of 2659 respondents).

Key findings related to the perceptions that medical students and junior doctors held with regard to their education and training; access to and awareness of information relating to postgraduate training and the factors that would influence their choice of where to continue to study.

This poster discusses the key findings from the study, in relation to the training and clinical factors that impacted on choice, but also to the career and employment factors and the issues of lifestyle which all featured significantly as elements that shaped the respondents perceptions. It provides quotes from those surveyed that give a richer and more depth to the various responses that have been generated and also seeks to provide some reflections on the possible reasons behind such a low level of engagement by trainees in such a high profile survey.
What do Junior Doctors really think about the brave new world of assessment?

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Introduction
The streamlining of medical training regulated by PMETB and delivered by MMC requires regular workplace based assessments. These can be completed by a variety of healthcare professionals, however consultants and middle grade doctors complete the majority. Although these assessments underpin career progression, based on achievement of competencies, there have been expressions of dissatisfaction in the value and number of these assessments. We wished to explore this further.

Methods
During a 1 day course on teaching skills, in a small group session, 9 doctors discussed the pros and cons of the current assessment processes. The results were documented by a scribe and fed back to the larger group of 23 doctors. Summary of the discussion and ideas for future development were also given.

Results and Discussion
The positive outcomes of these assessments were that; they provided structure to roles as trainees and gave motivation to study particular topics further. Constructive feedback received as a result of assessments was generally more focused than would otherwise have been received which gave juniors insight into their clinical practice, giving a basis on which to compare progress. It also gave confidence in areas of good performance and re-enforced good practice. They give concrete evidence to support training progress and have a degree of objectivity that wards based feedback sometimes lacks. When the content of the assessments was relevant to current practice they were particularly beneficial.

On the negative side there was a lack of time for senior and middle grades to complete these assessments, sometimes perceived as lack of motivation. This was also a consequence of the number of assessments required, and again perceived lack of training and experience in feedback methods. Most assessments were also completed during clinical time.

Conclusions
The process of assessment is, in theory, a good one. However the practical implementation often falls short. Time to train supervisors and to perform the assessments needs to be ring fenced. There needs to be further standardisation of the feedback process and identified routes for trainees and trainers to follow if they feel this has not been achieved. Trainees need to be aware that sometimes their performance may not be to the required standard and this also results in dissatisfaction. This is a two way process and interest and time need to be give by both parties. A wider debate on the number of assessments is required so we have quality not just quantity!
A Longitudinal Study of Educational Supervision in a cohort of Junior Doctors in a Teaching Hospital Trust

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Introduction

Educational Supervision (ES) of Junior Doctors has emerged as an important component of training. Generic PMETB standards for ES are published however, there is no agreed definition of time and resources required for ES. Our Trust has established standards for ES in relation to supervisor allocation (at induction), initial ES meeting (within 14 days), frequency, timing as well as content of formal ES meetings. This study assessed compliance with recommended standards.

Methods

A cohort of new-starter Junior Doctors (n=289) was recruited (F1=69; F2=87; ST1-2=54; ST3-6=70; Non-training posts=9). An initial questionnaire was sent by email 4-6 weeks into each post. The questionnaire assessed allocation of supervisor and timing, duration, content, trainer familiarity with portfolio and trainee satisfaction of the ES process. Follow up questionnaires to the entire cohort and narrative interviews of a subset of trainees (n=20) were undertaken to gather longitudinal data over the next 4 months. A parallel questionnaire was sent to all educational supervisors to enable comparison between trainees and trainers (data not shown).

Results

The overall response to the initial questionnaire was 66% (190/289). There was no difference in response rates between grades: F1 50/69 (72%); F2 46/87 (53%); ST 1-2 41/54 (76%); ST 3-6 43/70 (61%); Non-training posts 6/9 (66%). Of the responders 3% were unaware of their allocated supervisor; 7% had a supervisor but the initial meeting had not taken place; 54% had completed the initial meeting within the recommended 14 days and the remaining 68% (36%) met beyond 14 days (range 15-42 days). The mode duration of initial ES meeting was 30 minutes (Range: >15 Mins (13%); 15-30 Mins (50%); 30-60 Mins (31%); >60 mins (6%). The reported content and trainee satisfaction of the ES process was highly variable and overall 12% of trainers were thought to have inadequate familiarity with electronic portfolios. Qualitative data from narrative interviews continues to be gathered and analysed.

Conclusion

This study has highlighted a wide variation in both quantity and quality of ES. Useful quantitative data in terms of amount of time devoted to ES by senior medical staff has been gathered. This information can be used to inform the debate regarding time resources required for effective ES in the contemporary contractual framework. Further analysis of the qualitative aspects of this study is in progress – this will be used to define areas of good practice in ES as well as identify areas for improvement.
An evaluation of the General (Internal) Medical Teaching programme for Speciality Trainees/Specialist Registrars in response to the latest PMETB trainee survey

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Introduction
The latest PMETB trainee survey stated that overall satisfaction amongst Specialist Trainees/Registrars in General (Internal) Medicine (G(I)M) within the East Midlands Workforce Deanery (EMWD) was rated as average in comparison to other regions. Overall satisfaction was assessed from elements including quality of teaching, supervision and job experience, as well as usefulness and likelihood of recommending the speciality to others. Closer inspection of the data revealed a disproportionately low number of respondents (n=16, total=68), no evaluation of learning and lower scores for quality of teaching.

Aims
To better assess the quality of teaching and learning across the General (Internal) Medicine (G(I)M) programme within the EMWD by using actual trainee evaluations of teaching sessions from the same time period as the PMETB survey. To assess whether sessions that actively engaged learners satisfied trainees more than others that were predominantly didactic or lecture based.

Methods
All evaluations from a complete G(I)M training programme were reviewed. The timetable from each sub-speciality session was assessed for the method used to deliver teaching. Questions on the trainee evaluation form were categorised into three groups depending on their assessment of teaching, learning or the learning environment. Each question corresponded with an answer scored on a 5-point Likert scale. The total scores from each group were used to formulate descriptive statistics and calculate correlations. Non-parametric analyses were conducted using SAS version 9.1.

Results
571 evaluation forms from 16 different sub-specialities were reviewed. The mean number of attenders to each session was 36. There was a strong positive correlation between the quality teaching and the perception of increased learning. Trainees rated greatest satisfaction with opportunities to actively participate in sessions. Importantly, these sessions (e.g. Palliative Medicine) also encouraged learners to consider learning about the subject beyond the scope of the session.

Conclusion
The overall satisfaction with teaching on the G(I)M programme in the EMWD may be greater than current published data actually suggest. It would appear that sessions actively involving learners encourage trainees to learn more about the topic and are rated higher than didactic ones. Neither the internal nor PMETB survey assesses learning with confidence but with the prospect of knowledge based assessments being widely introduced, more attention should be paid to accurately measuring this outcome.

Reference
Do surgical Foundation posts deliver Foundation competencies?

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Introduction
The Foundation Training (FT) is a 2 year training programme used throughout the UK for newly qualified doctors. Specific competencies must be achieved by the end of the first year to allow doctors to register with the General Medical Council, the UK’s governing body for doctors. The two year FT programme is usually made up of six 4 month jobs including a combination of surgery, medicine and specialties. Following FT, doctors will be applying for speciality training and the perception is often that FT postings in a speciality would confer advantage. We set out to evaluate the surgical experience of foundation doctors during their training programme, focusing on the competencies relating to surgical jobs.

Methods
The data was collected using a questionnaire relating to foundation posts in the North West Deanery. Competencies relating to surgical training were highlighted and trainees asked to evaluate the amount of experience in each. Free text comments were encouraged.

Results
Eight of the fourteen competencies looked at were well covered by trainees, including consenting patients for theatre which was carried out an average of 33.8 times by each trainee during their 4 month job and IV cannulation which was carried out an average of 46.5 times by each trainee. However, six of the fourteen competencies looked at were poorly covered, including female catheterisation which was carried out an average of 0.1 times by each trainee during their 4 month job and nasogastric tube insertion which was carried out an average of 0.7 times by each trainee.

Following a 4 month surgical job 70% of foundation trainees felt confident about diagnosing and managing acute surgical problems but 30% did not feel confident in this.

Conclusion
Foundation trainees had the opportunity to carry out all of the specified competencies, though the amount of experience in each varied widely. The overall level is worryingly low in some cases. The surgical part of the foundation programme does not provide all trainees with the experience and confidence to deal with acute surgical problems and does not necessarily provide the opportunity for trainees to attend theatre. It is likely that trainees are selecting which type of experience they get in the light of their preferred career. Qualitative feedback has been helpful in defining features of surgical postings which will help education providers improve the design of their training posts.
Foundation competencies and the importance of out-of-hours experience

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Introduction
The Foundation Training (FT) is a 2 year training programme used throughout the UK for newly qualified doctors. Specific competencies must be achieved by the end of the first year to allow doctors to register with the General Medical Council, the UK’s governing body for doctors. The two year FT programme is usually made up of six 4 month jobs including a combination of surgery, medicine and specialties. Many trainees believe that out-of-hours experience is essential for training. We set out to evaluate the experience of foundation doctors during their training programme, focusing on acute surgery-related competencies and when they were acquired.

Methods
The data was collected using a questionnaire with foundation doctors in the North West Deanery. Trainees were asked about their surgical experience focusing on quality of experience during out-of-hours shifts compared to normal working hours and whether trainee’s found out-of-hours work valuable. Free text comments were encouraged.

Results
Rating the out-of-hours experience of the surgical job from very good, fair and poor, 55% of trainees rated it as very good, 40% rated it as fair and 5% rated it as poor. Rating the experience of the job during normal working hours 20% rated it as very good, 20% as fair and 60% as poor.

Compared to normal working hours 100% of trainees thought that on night shifts they were in situations where they made more decisions and managed patients independently. 90% thought they were exposed to a wider range of surgical problems and had more opportunities to deal with acutely unwell patients and 80% saw more surgical emergencies.

100% of trainees thought doing out-of-hours work was important and that their experience of surgery would have been worse had they not had to do so.

Conclusion
In conclusion trainees found the quality of the out-of-hours work good and valuable to their training experience. A disproportionate amount of acute experience, decision making and practical training were carried out during out-of-hours work, though the study confirms that it is also possible (though less usual) to get this experience during normal working hours. Qualitative feedback highlighted lack of clinical experience in some posts during normal working hours.

In an era of reduced out-of-hours working, education providers need to be focussed in providing the correct range of experience at whatever time the trainees are rostered to work. Simply cutting down working time in traditional working patterns will not deliver training.
ePortfolio – a flexible format for a range of learning evidence

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Introduction
All Foundation trainee doctors in Scotland are required to demonstrate evidence of learning and professional competence using the ePortfolio developed by NHS Education for Scotland. This evidence spans clinical skills across hospital settings (Work Place Assessment); structured tools for self / peer assessment (Multi-Source Feedback); flexible tools facilitating recording of the individual’s learning events (Educational Log); and formalised sign-off by Educational Supervisors that standards are reached during each post.

Methods
Results are currently being collated from the first full audit of the national dataset for one year of the Foundation Programme in Scotland (2007/08). The findings demonstrate the extent to which trainees engaged with the ePortfolio - but also highlight the breadth of evidence type which trainees submitted to meet, and often go considerably beyond, the minimum requirements expected of them.

Results
Examples of different types of evidence stored in the ePortfolio will be presented graphically exploring the ways in which trainees in 1st (n=800) and 2nd (n=810) year of the Foundation Programme used the ePortfolio to document their educational progress, including:

- **flexible learning tools**
  The ePortfolio provides trainees with a semi-structured Educational Log into which they can enter details of any learning event they experience. These include records of attendance at lectures; descriptions of clinical procedures and analysis of significant events. Trainees are prompted to reflect on what they learned. Over 93% of trainees used the Log to record 15,545 (1st year) and 19,298 (2nd year) events. The range of submitted events will be presented, with further exploration of other aspects of this substantial body of evidence.

- **summative assessment tools**
  Supervisor’s Reports contain quantitative assessment data across twelve areas of clinical and professional competence, and were submitted for over 90% of posts. The great majority of Reports scored trainees highly (median scores were 6 or 7 (on a 7-point scale)). The relationship to final sign-off for each post (Certificates of Performance) will be explored.

Discussion
This ePortfolio is firmly embedded in the Foundation Programme in Scotland (and the majority of the UK), reliably supporting trainees by facilitating both mandatory assessments and personalised repositories of learning evidence. Examining this data may encourage a greater understanding of the relative usefulness and reliability of the assessment tools. The completed audit will highlight areas for development of the Programme and the ePortfolio to ensure maximum benefit for trainees and the health service.

Keywords
- PostGraduate Education
- Other – ePortfolio
Validation of an approach to learning inventory and determining the predominant approach to learning of Specialist Registrars in Neurosurgical Training in the UK

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Seminal work on approaches to learning describes three approaches. The Deep, Surface and Strategic approach¹. A different model in the workplace environment has been reported². The deep approach, the surface approach is separated into 2 distinct approaches termed surface rational and surface disorganised. The strategic approach was not evident.

Methods
We developed an inventory of 30 items from previously validated inventories. There were 10 items for the deep approach, 10 for the surface approach, (5 for surface active and 5 for surface disorganised) and 10 for the strategic approach. Inventories were distributed to SpRs in each Neurosurgical unit in the UK. The data was analysed using SPSS to perform reliability assessments using Cronbach α measurements. Principal component extraction with oblique rotation was used to examine the underlying factor structure.

Results
60 inventories were returned giving a 37.5% response rate. A 3 factor solution was found. Factor 1 is consistent with a deep approach. Factor 2 is consistent with a surface rational approach ³ or the surface active as (1). We named this the surface rational-active approach. Factor 3 is consistent with a surface disorganised approach. This analysis retained 15 from the original 30 items.

Cronbach’s alpha reliability score for the revised 15 item learning approaches inventory are shown below.

<table>
<thead>
<tr>
<th>Learning Approach</th>
<th>Cronbach α</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deep</td>
<td>0.65</td>
</tr>
<tr>
<td>Surface rational-active</td>
<td>0.79</td>
</tr>
<tr>
<td>Surface disorganised</td>
<td>0.72</td>
</tr>
</tbody>
</table>

The revised inventory contains 6 items for a deep approach, 5 items for a surface rational-active approach and 4 items for the surface disorganised approach. This was used to determine the learning approaches of Neurosurgical registrars in the UK. Scores for learning approaches range from 1 to 5.

Mean score of learning approaches for all trainees in the study.

<table>
<thead>
<tr>
<th>Learning Approach</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deep</td>
<td>4.05</td>
</tr>
<tr>
<td>Surface Rational</td>
<td>3.22</td>
</tr>
<tr>
<td>Surface disorganised</td>
<td>2.85</td>
</tr>
</tbody>
</table>

Conclusions
This study has validated a 15 item learning inventory to determine the learning approaches of Neurosurgical trainees in the UK. Findings from this study broadly supports the workplace model (3) of learning approaches. The deep approach and the break up of the surface approach into two approaches which we have named surface rational-active and surface disorganised. There was no evidence to support a strategic approach to learning. Neurosurgical registrars in the UK predominantly utilise a deep approach to learning. We will repeat this study in 2012 when the future cohort of Neurosurgical trainees who have significant changes to their curriculum as a result of the modernising medical careers (MMC) and Inter-Collegiate Surgical Curriculum Project (ISCP) will have progressed through. Comparing the 2 cohorts may demonstrate changes to learning approaches as a result of the changing educational environment. As such the findings may offer a useful method to assess curriculum.

References
Challenges facing postgraduate psychiatry training

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Postgraduate medical education (PGME) in the UK continues to lag behind its undergraduate counterpart and continuing professional development. With the shift to a competency based training model being driven by PMETB there are key questions over how training schemes are organised, how trainees are assessed and how this fits in with postgraduate examinations. Issues such as conflict with service provision, development of a curriculum, alignment with educational theory and blueprinting are more pressing than ever.

In psychiatry there are particular problems around identifying reliable and effective assessment tools and the ongoing challenges in recruitment to the specialty. This is an opportunity to address these issues by making sense of the new training model and how to best utilise it. There is a crucial interface between Deanery and College, now in the shape of the new Schools of Psychiatry, which has a role in determining how these changes should happen. Whilst the basic competence framework must be got to grips with there is a further question over how quality and excellence of trainee, trainer and training can be identified and developed.

This presentation seeks to:
1) Review key literature on the effectiveness of teaching methods in PGME and specifically in psychiatry
2) Discuss the development of competency based training in other countries and specialties
3) Consider how these will apply to psychiatry training in the UK
4) Propose and question how to take this forward, specifically looking at which key factors identify quality and excellence
Lessons Learned from a Professional Public Health Education Programme serving Hong Kong and Southern China

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Background
Public health teaching is often seen as peripheral in medical education and many medical professionals are left to acquire public health knowledge and skills through postgraduate education. Meeting the medical education needs of postgraduate students from different cultures and educational experiences brings an additional challenge. Through a hybrid programme comprising traditional face-to-face teaching integrated with web-based technologies (including interactive discussion boards, and innovative supplemental teaching strategies such as pod- and video-casting), The University of Hong Kong Master of Public Health (MPH) aims to meet the varied needs of an international student body. However, the effectiveness of such hybrid programmes has not been well established.

Objectives
To assess the self-perceived effectiveness of an English language MPH programme to improve public health knowledge and practice in students enrolled from Guangzhou, China.

Methods
Semi–structured focus groups using guiding questions with 18 mainland Chinese students who have completed the one-year full time Master of Public Health programme in Hong Kong were conducted to assess programme effectiveness and student satisfaction. The focus groups were conducted in Cantonese Chinese, explored commonalities and differences in experiences in a non-threatening manner and were audio-taped, and then transcribed and translated into English.

Results
Of the 18 mainland Chinese students who have completed the degree, 63% were female with a mean age of 32 (SD 6.9) years. 72% of the students were physicians, 72% from Guangdong province and 62% sponsored by the Health Bureau. 50% of the students were registered in the Administrative Medicine concentration. The student’s self-perceived inability to 1) adjust to the rapid pace of learning, 2) adjust to a non-competitive learning environment, 3) maintain an acceptable academic standard and 4) work successfully in English contributed to learning stress. However, the students found that pod- and video-casting as well as widespread use of interactive discussion boards reduced their learning stress and facilitated their learning.

Conclusion
Web enabled technologies substantially improved student learning outcomes. After an initial period of difficult adjustment, students adapted to their new learning environment. However, they did not achieve the academic success they expected, for some the programme did facilitate career development and change.
Professionalism
Do medical students agree on what constitutes medical professionalism?

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Introduction
The profile of medical professionalism in undergraduate education has increased recently. At the same time, the term “medical professionalism” is widely used although its definition and measurement are variable.

Aims and objectives
The study surveyed medical students at Aberdeen University asking them to consider characteristics they regarded as positive and negative indicators of medical professional attributes among senior hospital doctors.

Methods
A self-completion on-line questionnaire was constructed, comprising 73 statements about knowledge, skills, behaviours and values used, demonstrated and held by doctors. It was sent to all medical students at the University in 2006. The survey was anonymous. Respondents were asked to rate their agreement on a 5-point Likert scale as to the relevance of the statements to professionalism. The questionnaire was produced using SNAP8 software. Results were collected and collated automatically before analysis in Excel and SPSS. Results were expressed as frequencies and scored to provide a numerical rank for each characteristic. The scoring weighted strongly held views over those weakly expressed.

Results
The overall response rate was 43% (414/964), rising from 30% (54/179) for 1st years to 62% (125/201) for 5th years. Medical students across the five years broadly agreed on the qualities they viewed as highly desirable of a medical professional and about those which were unprofessional.

Conclusion
This study gives an indication of the knowledge, skills, attitudes and values which medical students regard as being characteristic of a medical professional as well as those they regard as being unprofessional. Limitations of the study were the variable response rates for the different years and restricting the survey to one medical school. Despite this, the results suggest a degree of consensus between medical students at different stages of their undergraduate training.
Selection
Would Lay Assessors Impact on Candidate Performance in Core Medical Training Interviews?

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Introduction
Although lay input is a mandatory standard in PMETB’s standards for assessment, there is no current requirement in recruitment and selection to specialty training programs¹, though this may change in the future. As part of Northern Deanery’s interview process for core medical training (CMT), role playing stations were used as communication stations, using actors. We wished to assess whether there was a difference in scores attributed to candidates, between the medical assessors and those actors who were lay people.

Methods
Candidates attended a communication station at the interview where they were given a scenario and then asked to see the relative of the patient (the actor). At the end station, once the candidate had left the room, marks were given by two consultant physicians that fed into the interview scoring. Marks were also given by the actor and compared with those of the doctors. These scores did not contribute to the interview score. The candidates were assessed on clinical knowledge, communication skills and ability to cope with pressure. They were given separate scores between 0 and 10 for each domain.

Results
Candidates were assessed at the same communication station at 2 rounds of interviews, and 3 consultants and 2 actors participated. One actor did not feel able to assess clinical skills and therefore only 15 candidates were assessed in this category. There was no significant difference between the scores of the consultants. These scores were then combined and compared to those of the lay person. Table 1 shows results.

Table 1

<table>
<thead>
<tr>
<th>Scores</th>
<th>Clinical Knowledge</th>
<th>Communication Skills</th>
<th>Coping with pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>Doctor</td>
<td>Actor</td>
<td>Doctor</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>22</td>
<td>22</td>
</tr>
<tr>
<td>Mean (SD)</td>
<td>7.5 (1.28)</td>
<td>6 (1.45)</td>
<td>6.75(1.40)</td>
</tr>
<tr>
<td>P value (paired t test)</td>
<td>0.43</td>
<td>0.13</td>
<td>0.74</td>
</tr>
</tbody>
</table>

Conclusions
There was no significant statistical difference in the scores attributed by the doctors and lay actors across all three areas assessed. Although there are small numbers in this study, these results suggest that the use of lay people in this situation may not change the final scores of the candidates, even in stations such as communication skills. This should be considered when allocating scarce NHS resources.

References
Simulation
OSAT, a new model of assessment to measure the technical skill performance of medical undergraduates in simulation training

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Introduction
Measuring the educational benefits of simulation in medical training is highly complex, due to the many variables involved in simulation such as technical and non technical skills and the human factors. This has hindered the development of a recognised assessment tool. OSAT (Objective Simulation Assessment Tool) is an innovative assessment tool that has been developed to measure the performance of health care professionals in simulation training (ASME, Dublin 2007). This tool has been adapted to facilitate simulation training in medical undergraduates. OSAT assess the technical skill performance of medical students during a simulated scenario. This assessment takes place post-scenario while reviewing video playback in real time.

Aims
- To measure the performance of undergraduate medical students in an unplanned emergency simulation training programme using an objective tool for simulation assessment
- To evaluate the clinical skills of a team of fourth year medical students using a standardised assessment tool
- To encourage learning through reflective practice using video playback and facilitated tutor feedback

Methodology
The original OSAT tool was adapted to objectively assess the performance of undergraduate medical students. Fourth year students, working in teams of four, took part in an unplanned emergency simulation scenario which is videoed for analysis. The video is then viewed by the students and critically reviewed by the clinical skills team experienced in using the OSAT tool. The tool involves a fifty-eight point scoring system based on the ABCDE approach to management of critically ill patients [as recommended by the Resuscitation Council (UK) and NICE guidelines]. This is followed by group discussion linked to the video playback, which enables the clinical skills team to critically evaluate, and feedback on the student's performance. This provides the students with the opportunity to self-assess and reflect on their own performance.

Results
The initial assessment of the data suggests:-
1. OSAT enabled the assessment of the ABCDE approach to the management of critically ill patients
2. OSAT provided standardisation of clinical scenarios
3. OSAT provided a framework for identifying learning needs

Conclusion
Data assessment suggests that OSAT is an effective promising novel tool in measuring technical skill performance amongst medical undergraduates.
Staff Development
Peer Observation of Small Group Teaching

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Background
Peer observation has been described as providing many benefits for teachers\(^1\). For staff development purposes, we wanted to introduce a programme of peer support visits for 32 GP and non GP tutors involved in a community based course. The tutors deliver small group teaching to year 1 to 3 medical students at Dundee University.

Aim of poster
To describe the peer observation programme for community based tutors and to provide the evaluation results.

What was done
GP and non GP tutors teach in pairs to a group of 10 students on average. It is mandatory for each tutor pair to have an annual peer observation visit from their supporter. The supporter observes a session of small group teaching. After the session the peer supporter uses comments recorded in an observational framework and session evaluations from the students to provide feedback to the tutor pair.

Method used for Evaluation
Once the programme had been running for 3 years the tutors were asked to complete a questionnaire which investigated whether the tutors perceived that the peer observation programme provided the benefits described in Maclean’s paper\(^1\) which are listed in below:

- Providing reassurance for new staff
- Allowing feedback on innovations
- Revealing good performance
- Clarifying why a tutor may feel ill at ease
- Providing a mechanism for addressing known problems
- The observer learns
- Encouraging public discussion of what happens in teaching sessions.

It also asked the tutors to indicate any drawbacks of the peer observation programme and suggestions for improvement. Quantitative and qualitative data was gathered. Content analysis was performed on the tutors free text comments.

Results
14 out of 25 tutors responded. The results of the questionnaire showed the peer observation programme does provide the benefits listed above. Only 3 tutors suggested potential drawbacks to the programme and these were based around the students’ reactions to the extra person in the room and the effects of being observed. Only 1 person suggested any improvements.

Conclusion
A programme of annual peer observation of teaching can be provided for a group of tutors who deliver small group teaching in the community. It provides many benefits for the tutors who view it in a positive way.

References
A New Collaboration: The Scottish GP Tutor Group (SGPTG)

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Background
Each of the Scottish Medical Schools has its own distinct programme of general practice placements. Although the undergraduate courses differ, the skills required of General Practitioner tutors by each university are very similar. Tutor development in each university thus shares many features. In addition there is often geographical overlap between areas where practices are located and some GP tutors teach for more than one university. Particularly in remote and rural areas where locum cover and travel offer significant challenges collaboration can facilitate provision of near-tutor staff development. There is thus a strong argument for collaboration between medical schools that would value the diversity of their different approaches, while at the same time capitalising on sharing resources wherever possible and developing common quality standards.

Aims
‘Sharing resources for the benefit of the professional development of Scottish GP tutors while supporting GP individuality and recognising differences’

Collectively the GP co-ordinators of the five Scottish Medical Schools established a group in early 2008 with the following aims:

- Sharing good practice
- Forming a support network
- Sharing information about:
  - Practicalities
  - Course structure
  - Staff development
  - Assessment
  - Tutor career development
- Developing and sharing appropriate generic resources
- Developing joint tutor development programmes for generic skills
- Collaborating to develop and maintain consistent high standards amongst all Scottish GP tutors
- Involving the wider multi-disciplinary GP team in development activities
- Promoting community medicine education throughout Scotland

Achievements so far
Still in its embryonic stages, the group has:

- Visited each other’s tutor development conferences
- Shared course materials and details of courses
- Planned and run shared educational events in Inverness and Dumfries
- Mapped the location of all Scottish Teaching Practices
- Shared standards for practice and tutor accreditation
- Have agreed and are in the process of developing two collaborative research projects

Feedback has been positive:
‘Having colleagues from the other medical schools attend our tutor conference, and us attending theirs have been interesting and reassuring experiences. It is evident that the tutor and student issues and concerns we grapple with are similar across curriculums and practice settings.’

Take Home Message/Conclusion
This group is still in an embryonic stage however, already collaboration between medical school co-ordinators has informed forward planning, the maintenance of common standards and the promotion of community medical education in Scotland.
Feedback and Self-efficacy in Clinical Teachers

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Tutors in Personal and Professional Development (PPD) at the University of Durham, Queen’s Campus are hospital, community and primary care clinicians who facilitate first and second year medical students’ small group learning. Recently several PPD tutors asked for “feedback” on their teaching. Informal discussion of this request revealed surprising different interpretations; an initial literature search was undertaken into medical teachers’ views of feedback.

Review of the medical literature identified a dearth of research into medical teachers’ views; research that is reported confirms a desire for “feedback”. Relatively few references on feedback itself were identified; such references often referred to feedback within the contexts of appraisal or assessment.

This small qualitative study aimed to explore PPD tutor perceptions of the nature of feedback. An interpretivist stance was taken, beginning with individual tutors and setting out to understand their interpretations of feedback. Seven semi-structured interviews were conducted; data was analysed using the techniques of grounded theory as described by Strauss and Corbin.

Tutors perceive feedback to mean a process which begins when external opinion from a range of sources is given back to individuals. During cognitive processing, external opinion is compared to tutor internal opinion; intended outcomes include recognition of alternative perspectives, development of teaching skills, “feel-good factor”, “safety-check” and accountability.

The main unexpected finding of this study is the key interrelationship between processing of external opinion and tutor self-efficacy. Regardless of their level of teaching experience, tutors perceive a common enduring and deeply embedded anxiety that they are actually bad at teaching, “the am-I-crap scenario”; such perception is reinforced by previous experiences of negative opinion. During cognitive processing, the extent to which these negative preconceptions are confirmed or refuted influences tutor self-efficacy, self-esteem, confidence and motivation to develop as a medical teacher.

This small study has important implications for faculty development programmes and wider implications concerning the way that information about performance is given back at all stages of medical education. Undergraduate experiences of being provided with external information on performance are crucial to establishing efficacy expectations and response to future feedback situations; negative experiences set the scene for negative preconceptions of performance which can endure throughout a career. It is not enough simply to provide information about performance to medical students at early stages of their training; understanding the way that individual students interpret external opinion is essential to maximise learning.

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Teaching About Specific Subjects
Medical students' perceptions of education in safeguarding children: a qualitative study

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Background
Child maltreatment is a significant health and social problem in this country. Given the extent of the problem and recent high profile cases in the media, there are increasing efforts to improve training in safeguarding children for all health professionals. All newly qualified doctors are expected to be aware of safeguarding and child protection procedures at the time of qualification and so developing the educational provision of this challenging subject for undergraduates is a priority.

Aims
To investigate medical students’ thoughts and perceptions on issues relating to safeguarding children and the need for education in this subject; their clinical experiences and ways of improving their educational experience in safeguarding children. In carrying out this investigation, we aim to seek ways to develop the educational provision for this subject in the future.

Methods
We conducted a qualitative study using focus group methodology. Medical students at different stages of their clinical training were invited to participate in focus group discussions. The students were asked a series of questions exploring their thoughts and views on safeguarding children and how best to teach the subject. An experienced, independent moderator facilitated the discussions, which were audiotape recorded, transcribed and analysed according to standardised methodology.

Results
17 medical students volunteered to participate in three focus group discussions. These students placed great emphasis on emotional aspects of the subject. They commented on their uncertainty of their own role and concern about managing emotions that might be experienced in child protection cases. They described several experiences of child protection issues at early stages prior to having had any formal education on the subject. The students also discussed a range of ways of improving the learning about safeguarding children, notably the need for greater support and supervision from experienced professionals. Summaries of the themes emerging from the discussions have been presented in diagrammatic form and are supported by direct quotations.

Conclusions
These findings have been used to discuss options for developing new strategies to improve the educational provision in safeguarding children for medical students. Such development of new strategies will serve to increase doctors’ knowledge and awareness at earlier stages of training. With ongoing training at postgraduate level this will form part of ensuring doctors are more prepared for dealing with cases of child protection and in safeguarding children.

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Medical Student Perceptions of Ophthalmology - Is it enough?

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Background
Concerns have been voiced from both Ophthalmologists and Educationalists that Ophthalmology teaching in the undergraduate curriculum has been marginalised\(^1\). About 2-5% of GP consultations are related to eye problems and these rates are steadily rising\(^3\). Previous studies have shown that most primary care doctors view their undergraduate ophthalmic medical education as inadequate\(^4\). To date, there has been no attempt to elicit students’ views of Ophthalmology as a specialty. It is imperative that sufficient undergraduate exposure to Ophthalmology is available, in order to improve clinical skills and widen the applicant pool for Specialty Training\(^5\). We examined junior medical students’ views of Ophthalmology prior to and following their first clinical exposure to the specialty.

Methods
A self-administered retrospective, anonymous questionnaire consisting of closed-ended questions was distributed to 23 3rd year medical students following their first and only dedicated Introduction-to-Ophthalmology Day. This session was part of the Foundations of Clinical Practice Course. The students were asked 14 questions with a combination of multiple choice answers, Rank-order and Likert response scales.

Results
21 out of 23 students replied, giving a response rate of 91%. Prior to the teaching day, 43% of the students thought eye complaints to be uncommon in General Practice, while 5% considered them extremely rare. 29% of students were not aware that Ophthalmology is an independent specialty. Only 33% of the students rated Ophthalmology as an interesting specialty prior to the teaching day. However afterwards, 62.5% found it interesting and 19% extremely interesting. All students (n=4) who had anticipated Ophthalmology to be “Not-at-all interesting” had changed their mind. Prior to the teaching day, 14% of students thought there should be no Ophthalmology teaching in the undergraduate curriculum. Following the day 40% of students reported that they would have wanted a two-day long course, while 15% would have preferred a full week on Ophthalmology. When asked to select one desired Ophthalmic learning outcome, 40% of the students chose “Eye examination skills for non-specialist”.

Conclusions
Our students not only found Ophthalmology interesting but also requested more teaching. The feelings about the time for Ophthalmology in the Newcastle Undergraduate curriculum concur with the views expressed by professional bodies. Effective undergraduate teaching appears to be not only good for clinical skills but an effective way of changing misconceptions and stimulating an interest in Ophthalmology. This can only have a positive effect on future recruitment!

References
Efficacy of Breaking Bad News training: An experimental investigation

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Background
Competency in breaking bad news (BBN) has been highlighted as an important part of medical education, and a required aspect of undergraduate medical training in the UK (GMC Tomorrow’s Doctors 2003). Consequently, there has been a drive to develop appropriate training in BBN. Various frameworks have been proposed to provide a structure for BBN, one of the most widely accepted of which is SPIKES (Baille & Buckman, 2000). This highlights particular aspects of BBN, namely setting and listening skills, patient’s perception, invitation, knowledge, empathy, strategy and summary. At some medical schools, SPIKES has provided the structural framework for undergraduate students learning about BBN. As with all training sessions, evaluation by students and tutors, and input by experts in the field have informed the development and refinement of the teaching. There has not, however, been extensive experimental evaluation to demonstrate the effectiveness of this important aspect of medical education. In the light of recent debate about methodological quality in medical education research, it was felt timely to investigate the efficacy of BBN training in a rigorous and replicable manner.

Methods
Thirty three 4th year undergraduate medical students were asked to take part in 2 videotaped BBN consultations with simulated patients, 6 months apart. At each occasion, students filled in questionnaires about their confidence and beliefs about BBN, as well as their own experience. Simulated patients also completed ratings of students’ performance. Following the first consultation, half of the students received BBN training (3 half day sessions). After completion of all consultations, expert coders (blinded to condition and time, trained to reach good inter-rater reliability) rated the consultation according to SPIKES on a 12 item scale.

Findings
BBN skills increased significantly between the first and second consultation in those who had received training (ANOVA, p< 0.01). There was, however, a differential effect on specific skills improvement – for example, training improved invitation and knowledge, but summarising remained poor in both groups. Training had a significant positive effect on attitudes toward BBN, but did not increase confidence.

Conclusions
BBN training improved BBN skills overall and particularly increased some tasks of the consultation. Contrary to previous findings, confidence was not increased, and reasons for this will be discussed. The study provides a rigorous model for examining the efficacy of communication education, and its applications will be further discussed.
Medical Student Attendance in Surgical Theatres

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Surgery is an integral part of the undergraduate medical curriculum. All F1 junior doctors are expected to complete at least one 3 month surgical post to fulfil GMC registration requirements\(^1\). Although this job mostly relates to ward-based patient care, it is paramount that medical students obtain knowledge of surgical operations for correct pre-operative and post-operative care. The operating theatre could play an important part in a medical student's surgical placement. Surgeons spend a lot of time there, and are often more free to teach medical students in that environment\(^2\).

We set out to measure medical student attendance in surgical theatres and explore students' views regarding attendance.

Registers were taken of medical students in the main surgical theatres at the two Sheffield teaching hospitals. Researchers manually took registers twice daily for 5 consecutive weeks during April-May 2008. We also explored the views of medical students on their theatre experiences via a questionnaire on the Sheffield medical students' website.

The observed counts of medical students in theatre were expressed as a percentage of the expected number of attendances, assuming every student attended surgery twice per week. There was a 27% attendance in Gynaecology, 51% in Orthopaedics, 15% in Urology, 0% in Cardiac surgery, and 2% in General Surgery.

There was a 36% response to the online questionnaire. 28.4% of students agreed that they should attend theatre twice a week during a surgical attachment. It was found that many students wish to participate in theatre and help "carry out small harmless things". Negative comments include feeling that they were peripheral spectators who could not see anything and were unwelcome in theatre.

Student attendances in the operating theatre are low. This has negative implications for introducing students to the possibility of a surgical career. Measures to encourage higher student attendance may include formal theatre induction sessions and better use of theatre cameras and telemedicine. Most importantly, there needs to be a change in attitudes, with renewed emphasis on the legitimate role of students to all staff, including surgeons, in the operating theatre.

References
Teaching and Learning
A Successful ‘Learning Triangle’: Nurse Practitioners, Medical Students and Teaching Fellows

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Background
An important challenge facing undergraduate medical curricula is ensuring student exposure to acutely ill patients in a safe, educational environment. The General Medical Council is very keen to enhance medical students’ direct exposure to patients. ‘Hospital at night’ is co-ordinated by Medical Nurse Practitioners, who autonomously assess and manage acutely ill medical in-patients, within a medical team. Medical Nurse Practitioners (MNPs) do not have a formal continuing professional development (CPD) framework, and have diverse backgrounds. The two Medical Teaching Fellows at Keele University are both General Internal Medicine Specialist Registrar trainees.

Innovation
Medical students (years 3-5) were given the opportunity to sign-up for a ‘Hospital at night’ experience (on Friday or Saturday nights) where they were taught primarily by the MNPs. 16 students have signed-up since its introduction in October 2008, with nearly every available night being utilised by the students. There are 9 MNPs across the Trust, and all are participating in this innovation. The students meet for medical handover at 9pm, and can stay as long as they wish.

The Medical Teaching Fellows in return provided a monthly afternoon teaching session on an aspect of Acute Medicine for the MNPs, as informal CPD. Topics covered in seminars include acute renal failure, acute liver failure, and respiratory failure.

Evaluation
The students were invited to give feedback via a paper-questionnaire after the ‘Hospital at Night’ learning experience.

14 student evaluations have been collected. Feedback has been overwhelmingly positive. All students had stayed for at least 4 hours. The students appreciated the specialist skills of the MNPs, and the valuable learning opportunities within the ‘Hospital at Night’ team. All described the quality of teaching as good/excellent, one commenting ‘I think this is an amazing experience. I think all medical students should try it out.’

The feedback shows that this learning opportunity is valued by both year 3 students, new to clinical studies, (wanting to practice clinical skills, death certification etc), and by year 5 students, keen to practice the skills of a newly qualified doctor (with exposure to sick patients, attending cardiac arrests).

The MNPs in turn have been positive about the seminars, with them particularly appreciating a clinical case discussion approach, integrating key pharmacology and pathophysiology underpinning principles.

Conclusion
Collaborative multi-professional learning has been successful within the context of Acute Medicine. This ‘triangle’ of learning is reproducible at other institutions and within other fields of Medicine or Surgery.
An Assessment of a Student Workbook for Medical Students in Their Child Health Block

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Aims and Objectives
1. To assess the usefulness of a newly expanded Child Health module workbook
2. To investigate whether students find the new workbook is an improvement on the previously provided, smaller, logbook
3. To obtain suggestions for further improvements from the students

Introduction
It is well known that a logbook is useful to direct and focus learning\(^1\). Kolb’s theory of learning implies that using a logbook or checklist may encourage students to learn in a self-directed way, while encouraging experiential learning\(^2\). In Leicester, we previously provided a simple logbook in the Child Health course, which was very short, consisting of a list of paediatric problems which the students should aim to cover over the course. Over the last 2 years this has been developed and expanded to become a more comprehensive learning tool which we call the workbook.

This study was carried out to assess the workbook’s usefulness in: checking that students have covered the syllabus; checking the timetable and instructions for the course are adequate; and checking if new material added to the workbook is helpful. The simple logbook had previously been assessed by the students, and their valuation of the new workbook was compared to this.

Method
A questionnaire about the logbook was completed by one block of medical students, \(n=30\). The logbook was modified into a more detailed workbook, and a further questionnaire was given out to a subsequent block of students, \(n=32\). A comparison was made. Further questions were asked to find the value of the additional material in the workbook.

Results
1. The proportion of students finding the workbook useful increased from 50% for the logbook to 72% for the new workbook.
2. Both logbook and workbook gave a good idea of what was expected in the Child Health course.
3. Of the additional material in the expanded workbook, the suggested clinical skills, practical skills and parental advice sections were considered useful by the large majority of students.
4. Practical short answer questions and data interpretation questions included in the workbook, were considered useful by over 90% of the students.
5. Information on newly introduced neonatal and community days was satisfactory.
6. Suggestions were made to improve the layout of the workbook.

Conclusions
1. A workbook is a valuable learning tool for students
2. The value can be increased by taking structured feedback from students and making adjustments accordingly

References
The University of Dundee offers Phase 3 (clinical years) medical students two opportunities to spend time in general practice. In 4th year they spend 4 weeks in an “urban” practice and in 5th year a minimum of 4 weeks in a “rural” practice. By this means students are offered a range of GP experiences; in an area of urban practice with its associated deprivation and in rural areas where the GP role may be very different. The rural experience is also aimed at offering early exposure to rural practice with the hope of facilitating the recruitment of practitioners to rural areas in the long term.

Until recently the definition of urban/rural was made using the judgement of the course organisers. However, Scotland has an urban rural classification which is well defined\(^1\). Working with the University’s Geography Department and with the data held by the Course Organisers, GIS mapping has allowed us to view the distribution of the practices more objectively and to review our provision.

The distribution of practices in 4th year suggests that we do indeed fulfil our aim with the bulk of teaching taking place in categories 1 & 2 (large urban or other urban). In 5th year the spread of practices is much wider covering categories 1-8. Practices falling in the lower classifications reflect those on the boundary of large urban areas; those are used when student need requires access to the Dundee area. However, 30/75 of practices fall into categories 7 and 8 of the URcat classification and a further 20/75 fitting into categories 4, 5 & 6. Student time in practice reflects the availability of practices.

Many of these practices offer their services to more than one University and further collaborative work is planned to look at the experiences provided by all the Scottish Medical Schools.

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What effect does one year at a PBL medical school have on students’ critical thinking and reflective skills?

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Background
The GMC recommends that graduates from medical school must be able to ‘reflect on practice, be self-critical and carry out an audit of their own work and that of others.’ (General Medical Council, 2003). A link between critical thinking and reflective practice has been established by Schön (1983) and Brookfield (1987). They describe reflection as an essential stage in the critical thinking process. This study was designed to measure the change between the first year and second students’ reflection and critical thinking skills within the Liverpool medical school PBL programme.

Methods
Two previously validated and reliable questionnaires were chosen for this study: The California Critical Thinking Disposition Index (CCTDI) and the Level of Reflective Thinking (LORT) questionnaire. The CCTDI measures the overall disposition towards critical thinking and seven critical thinking sub-scales these include: truth-seeking, Open-mindedness, Analyticity, Systematicity, Self-Confidence, Inquisitiveness and Maturity (Facione and Facione, 2007). The LORT consists of four levels Habitual action, Understanding, Reflection and Critical reflection (Kember et al., 2000). As part of a wider control-intervention study randomly selected students volunteered from first and second year and completed two questionnaires at the beginning of their second semester. The students were asked to complete the two questionnaires without discussion after instructions provided with both instruments. The two instruments took 15-30 minutes for each student to complete.

Progress
Questionnaires have been completed by both the first and second year volunteers. These two questionnaires need to be scored and then a comparison of the two groups scored will be analysed looking at the overall and different sub-scales of the questionnaire scores.

Further work
The next stage of this project is to ask the first year volunteers to return at the beginning of the second semester of their second year and repeat the completion of the two questionnaires. This will allow further analysis of the development of the critical and reflective thinking skills.

References
How and when do medical students learn about leadership?

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Background
There is a call for increased and more effective leadership by doctors to improve efficiency and clinical effectiveness. All doctors should be aware of their ‘leadership profile’ so that they can deal with everyday management and leadership issues and we require leaders who can look ahead, inspire, see the potential in others and empower them.

Methods
As part of the “Research Attachment” for second year students, a study was undertaken to investigate the student experience of learning about “leadership” and to consider whether the leadership and team working skills gained during medical school provide students with adequate experience to develop and adapt to the challenges of clinical leadership.

A questionnaire was available to all students via the School’s Virtual Learning Environment. The quantitative data was analysed to indicate the percentage of respondents in agreement with each statement. The qualitative data from the two free text questions was analysed using content analysis.

Results
The response rate varied between 72% and 10% depending on the Phase of study and there was a high degree of consensus.

Students agreed that the qualities of effective clinical leadership were good communication skills (98.2%), good team work (96.6%), professionalism (95.8%), and being a person of integrity (92.6%). 92.8% agreed that the NHS needs doctors who are able leaders, with 75.6% agreeing that the NHS should not be led by non clinicians (with 92% of fifth year students supporting this view). 80% of students felt that poor clinical leadership affects the outcome of a patient’s health.

52% of final year students felt that the undergraduate course did not provide them with the necessary leadership theory and skills with a further 33% were unsure whether it did or not.

The two free text questions about when and how to develop leadership skills within the MBChB course indicated that it should begin in the first year of the course and be continued throughout and that the small group, case-based activity offered the most useful valuable developmental opportunity.

Recommendations emerging from the results of the study included strengthening small group work, giving a leadership award and holding a leadership symposium.

Conclusions
The place and role of leadership within the undergraduate curriculum requires consideration. The findings suggest a need for a more formal teaching of leadership and incorporating the recommendations will help to prepare students of the challenge of clinical leadership.
An observational study of undergraduate students learning styles

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Background
The way that students learn is an important consideration for medical educators, as students learn in different ways and with different preferred styles. Some students learn more effectively in small group tutorials, while others prefer a more traditional, didactic, style of teaching. The problem based learning (PBL) approach to medical education relies heavily on students working collaboratively in small groups to achieve the learning outcomes of the course. At present very little research has been conducted that concentrates on the effect of a PBL curriculum on the learning styles used by medical students. In 2006 Novak et al described pharmacy students moving from a deep learning style towards a more superficial learning style; however this is contrary to existing PBL literature that suggests that PBL generates a persistent deeper understanding of a subject.

Study Aim
In this study it is proposed to investigate the types of learning style that first year medical students prefer upon entry to medical school and to observe whether these styles change during the first year of a PBL curriculum.

Methods
Students were invited to complete a paper-based learning style questionnaire, Grasha-Reichmann student learning style scale at the start of the first year in medicine and at the end of the year. The participating students were also invited to complete a qualitative questionnaire aimed at drawing out their perceptions of their learning styles and any changes they have adopted, towards the end of year one.

Summary of Results
67 first year medical students were recruited in to the study and completed the questionnaires. The students showed a strong tendency to a collaborative and participant learning style and demonstrated slight gender differences in the preference of learning style upon entry to medical school.

Conclusions
This study has investigated the learning styles of students upon entry to a PBL curriculum and found them to be collaborative and participant learners. The students are aware of the changes to their learning patterns during the first year of medicine and this suggests some changes to their learning styles changes over time.

References
Developing the potential of foundation doctors as teachers

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Foundation doctors have little time to partake in teaching despite the emphasis placed on this in “Tomorrow’s Doctors”. Whilst the creation of academic foundation posts partially redresses this deficit, formalisation of programmes, such as the one described, gives students and tutors ownership of their learning and teaching respectively. Peer- and near-peer teaching has much to offer both student and tutor. There are an increasing number of reports of peer-teaching in undergraduate medical education. However, there are few formal large-scale programmes with junior doctors as educators.

Ninety-nine foundation doctors were recruited from three university hospitals and six district general hospitals in the East Midlands to act as tutors. Experienced educators and examiners delivered a “teach the teachers” course to help develop the doctors’ teaching skills. One-hundred-and-eighty-four medical students (73% of cohort) participated in a seven-week programme to help them prepare for their final medical examinations. Pairs of students were allocated a tutor who observed students’ history-taking and examination skills on a weekly basis at the bedside. Foundation doctors provided constructive feedback with the benefit of their own recent experience in order to improve students’ confidence and performance. Students completed a questionnaire at the end of the programme to identify individual tutors’ strengths and to highlight areas for improvement.

In addition, systems-based lectures were delivered by foundation doctors each week to emphasise key theoretical concepts. Topics included medical specialities, surgical specialities, psychiatry, paediatrics and obstetrics and gynaecology. Lecture materials and audio recordings of each session were made available to all students, including those in district general hospitals, via Leicester Medical School’s virtual learning environment. Students attending lectures completed web-based questionnaires to enable lecturers to further develop their presentation skills.

Cate and Durning describe a peer tutor as a “journeyman” aiding the transition from apprentice to master. Reciprocally, teaching boosts tutors’ confidence, helps consolidate their own knowledge and offers an insight into a career in education. This near-peer teaching programme offered foundation doctors the opportunity to acquire the attitudes and competencies of effective educators.

References

What Do Junior Doctors Think Makes A Good Teacher?

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**Background**
Teaching is important for the care of patients and for the professional development of all doctors. The GMC encourages doctors to be involved in teaching, and to ‘develop the skills, attitudes and practices of a competent teacher’. Most people can teach but however, very few of them are good teachers. Junior doctors are under represented at national levels when policy is instituted. We therefore explored the qualities that a person must possess to be a good teacher.

**Methods**
We asked 23 doctors of all junior grades who attended a course on teaching and training to discuss the qualities that make a good teacher in a small group session. This was noted by a scribe and afterwards, the entire group fed back.

**Results**
From the small group session, we have found that the qualities of a good teacher can be divided into 2 main categories: core skills and desirable skills. The core skills of a good teacher include good communication, planning and organizational skills, being knowledgeable on the topic, and being able to accept criticism and able to give fair and constructive feedback. The desirable skills include attributes that will inspire the students, being patient and caring for the development of the students, and being versatile in teaching methods.

**Discussion**
Being a good teacher can be difficult to achieve. A person must possess the core skills and preferably the desirable skills to be labelled as a good teacher. Many of us probably have core skills and many of these can be taught. However, the desirable skills reflect the enthusiasm and personality of a teacher which is more difficult to learn.

All doctors should be able to achieve the core skills, and it may be helpful to consider skills in this way when planning training for medical teachers. We would also like to investigate whether the skills of the teacher influence the student in their future career; however this is a very complex issue.
What do undergraduate medical students think about learning outcomes?

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Introduction

‘Learning outcomes’ have pervaded all areas of medical education and training in the last decade or so. Newcastle Medical School has an outcome-based undergraduate medical curriculum, with LOs defined at several levels: degree programme, academic year, course/rotation, and individual teaching session. Students are introduced to the concept of LOs early in first year as part of study skills, and are encouraged to refer to outcomes frequently, particularly at the beginning of a course or rotation, before and after teaching sessions, and of course when revising. Two of the authors (AB & HK) are 4th year medical students undertaking a student selected component in medical education. They felt that their understanding and use of LOs had changed as they had progressed through the course. This study set out to explore students’ views about LOs, both their usefulness in guiding study and revision, and their perceptions about congruity between intended LOs, curriculum content, and what is assessed, and whether these differ between year groups.

Methods

An anonymous on-line questionnaire survey with 1st, 2nd, 3rd and 4th years (with one email reminder) and two focus groups with 4th and 5th year students respectively, were used. The questionnaire comprised a mixture of 4 and 6 point rating scales and free text to explore how often and in what situations students used LOs, and to what extent they felt there was congruence between LOs, curriculum content and examination content. Analysis used descriptive statistics and thematic analysis of free text comments.

Results

At the time of writing this abstract the following response rates have been attained: 1st year 83%, 2nd year 90%, 3rd year 39%, 4th year 49%. Although only basic analysis has been possible so far, generally, across all four year groups, LOs were perceived to be very useful or useful by a majority of students. Most referred to LOs during revision, but very much less so before, during or immediately after a teaching session. Around ¾ of students in all years thought there was congruence between curriculum content and LOs, but only between 54 and 60% that curriculum content correlated with exam content. Statistical analysis will be carried out looking for differences, as well as analysis of free text comments. Data from the focus groups will also be analysed.

Discussion

The main findings (so far), namely that students in all year groups found LOs useful and appear to use them strategically, notably in revision, and that there was a perceived lack of congruence between LOs and exam content is of interest. Although the survey is based on self-report and carried out in only one institution, a strength of the survey is that it is based on students’ views. The findings may be generalisable to other outcome-based schools and raise important issues for curriculum designers, exam setters, those involved in supporting students’ study, and teachers alike.

Reference

Maximising learning in the workplace for undergraduates: optimising service opportunities

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Background
Pressure on trusts to increase efficiency versus the need to provide training is a well-recognised problem. In Obstetrics and Gynaecology there is also a concern about recruitment and retention into the speciality. It is well recognised that a good experience as an undergraduate can influence career choice. Thus it has never been more difficult or important for us to provide high quality teaching in our speciality.

Aims
- To develop a formalised teaching session within a routine operating list
- To assess the feasibility of this as an on-going educational tool
- To compare students perceptions and feedback pre and post teaching

Methods
We identified the elective caesarean section list as a possible teaching opportunity. This operating list occurs every weekday and has a largely dependable workload.

The following learning objectives were considered:
- Knowledge: anatomy, indications for, and risks of surgery.
- Skills: scrubbing, assisting, respect for tissue
- Attitude: patient counselling, theatre etiquette

On a weekly basis two students attended this list with the same teacher. They saw the patients pre-operatively before receiving a tutorial about the procedure and an introduction to surgical skills. The students then scrubbed in and assisted with the operation while receiving further standardised teaching.

The students were asked to fill in a pre and post session questionnaire to assess their prior experience of the theatre setting and learning gained from this session. Preparation time was four hours; the on-going work was minimal and incorporated into theatre ‘down-time.’

Results
Data collection is continuing. Twelve students took part, eight sets of questionnaires have been returned. Preconceptions of operating theatres were largely unfavourable with 3 students having been put off a surgical career by past experience. The students found this exercise both enjoyable and educational. Six are now more likely to consider a surgical career and four more likely to consider a career in obstetrics and gynaecology.

Conclusion
Our experience of the first rotation of students has shown that this is a feasible method of optimising teaching whilst continuing service commitment. Initial results from student feedback suggest that this is a useful teaching aide and may help with recruitment into this and other surgical specialities. As this project continues with further student intakes we hope to show in more detail the positive outcome of this innovation.
Early clinical introductory attachments for medical students: how important is it?

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Aim
The GMC has recommended that all medical schools’ curricula must stress the importance of communications skills and teamwork in medical practice because this will help medical students carry out their various roles as future doctors within the multi-professional environment (Tomorrow’s Doctors, 2003)¹. The aim of this study was to evaluate the insight gained by second year medical students from Imperial College London (IC) during their first clinical attachment. Our secondary aim was to quantify the amount of time UK medical students in the first two (“pre-clinical”) years spend in clinical placements.

Method
44 second year students completed a one month attachment at Northwick Park Hospital. During that period, they attended multidisciplinary team (MDT) meetings, sessions with other healthcare professionals (HCPs) - nurses, physiotherapists, pharmacists, occupational therapists - and visited various laboratories. The students also had weekly small group tutorial sessions with Teaching Fellows during which they presented case histories and received feedback on their performance. After the attachment, they were asked to fill in a questionnaire to ascertain their experience, understanding of the roles of HCPs and importance of MDT approach in patient care. We also contacted all 32 UK medical schools by telephone to enquire about the extent of clinical exposure in the predominantly non-clinical years and to gauge how IC compares with other universities.

Result
All students found the small group teaching sessions useful and felt more confident communicating with patients and other HCPs. 95% understood the concept and importance of MDTs. 93% understood the roles of HCPs and how a hospital generally functions. The majority of students (98%) found this placement useful in relation to their general training; 93% were convinced they will continue their career in medicine. Out of the 32 UK medical schools contacted, 28 responded. Students on average spend 26.9 days in their clinical placements, with a surprisingly wide range of 0 to 89 days. Only one university offered no clinical placements. IC offers 21.5 days, placing it approximately halfway in the identified range.

Conclusion
Our results show that most of our students understood the importance of MDT approach to improve quality of patient care. Early contact with patients also enabled our students to gain more confidence in communicating with a wide range of people. Given that some medical schools offer little exposure, these advantages should be borne in mind and more emphasis should be placed on vertical integration with clinical input in the science years.

Reference
Study approaches in Graduate-Entry Medicine students

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Biggs et al categorise learning approaches and motivation into: a deep approach, a surface approach and an achieving or strategic approach. Medical students with deeper approaches at the beginning of their degree were found to have higher scores on MCQs, which strengthened over time, and those with deep or strategic approaches to learning were found to have better knowledge gained on clinical experience. Researchers have highlighted the limitations of categorising students into preset categories and have instead carried out more explorative research into medical students’ views and experience of learning.

The Graduate-Entry Medicine degree at The University of Nottingham is a 4-year accelerated course in which students learn basic and clinical sciences in an intensive 18-month programme. The curriculum is supported by teaching and curriculum approaches, such as problem-based learning, lectures, workshops, clinical skills and early clinical experience. The aim of this study was to explore the students’ perspectives of studying on this degree, comparing two different cohorts triangulating two different methods of data collection.

In the first project, the perspectives of a purposive sample of 10 students (reflecting a range of attainment and gender) were gained via their reflective account of their first year. In the second project students’ views were collected in three focus groups (a self-selected sample) at the end of their first year. Ethical approval and consent was gained for both projects. Qualitative theme-based analysis and grounded theory were used to categorise students’ thoughts and experiences, providing a depth of knowledge about the student perspectives.

The students in both projects reflected on a wide range of themes, including (i) action plans, (ii) time management, (iii) assessments, (iv) current and past experiences, (v) teaching and curriculum approaches, (vi) social support, (vii) motivation, and (viii) their background and culture. The reflective essays, in contrast to the focus groups, did not include discussion about the diversity of students on the course or comparisons with other courses.

Future work will be carried out with another cohort of students, who will be interviewed at three points in the 18-month course, to investigate their thoughts with respect to the experience of learning, curriculum and teaching approaches. These results will then be triangulated with the two previous projects.

References
Lessons learned while developing new programs to strengthen the undergraduate pre-medical experience to enhance a Successful medical school career

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Increasing US medical school admissions are indeed happening; but medical schools are experiencing that less of their graduates are choosing careers in primary care (Santana 2002). There is talk about more “holistic” admissions (thought to be students who might chose a primary care specialty), but the reality is that these “more holistic” students may not have the better test scores and comfort level to survive medical school. West Virginia University has started 2 different kinds of “undergraduate pipelines” to aid with admissions for their medical school; one on a regional campus (MedSTEP), and a different program on their main campus (MedBound). There is hope that by improving the ability of students to have a better grasp of the rigors of medical school, an earlier exposure to the human side of medicine and experiencing the joys of interactions with patients, and seeing a wide spectrum of primary care services while preparing for medical school entrance, that the students will be better prepared to choose an area of medical service that will suit them and their communities the best. We present here some of the issues that have arisen in the 5 years since these pre-medical school admission programs have been started, and what we foresee as changes that have to happen to improve the success of these programs.

References